

678 27364 92836 89428 61268 74982 36498 32764 81276 81
986 48932 70987 32123 49817 26346 81287 65491 87364 81
721 75654 55656 12737 72727 72727 91918 63473 67867 70
723 87629 37677 32612 53498 71296 28756 18276 98716 87
7269 76329 74698 76857 98670 27601 56701 57601 73648 15
591 87364 87265 96710 27630 12673 84769 28743 98127 59
58 63298 75698 27465 87326 49876 28376 81273 98615 62
667 87432 74328 78674 29867 32867 67867 86786 43296 432
657 68768 68763 34234 34238 68768 62342 48273 48768 234
736 98432 32432 86743 43286 43286 43286 43286 43286 432
743 86743 86743 39867 32867 86743 43286 43286 43243 867
741 86743 86743 86743 86743 86743 86743 86743 86743 435
543 98798 98754 98754 98754 98754 29867 67543 67986 867
176 87698 69876 87698 69876 87612 12341 34867 86798 632
967 43298 65656 56756 56123 32143 14321 32143 14321 321
721 32787 58765 76587 58765 76587 58765 76587 58756 765
75475 96547 56965 36549 54365 36549 54365 36549 543

Numbers & Oddities

a.k.a. The Spooks Newsletter

Edition #190, July 2013

Editor: Ary Boender email: ary@luna.nl

Check for previous newsletters, info, sound samples and databases also:

NUMBERS & ODDITIES <http://www.numbersoddities.nl>

SPY NUMBERS ONLINE DATABASE <http://www.spynumbers.com/numbersDB>

UTILITY DXERS FORUM (UDXF) <http://www.udxf.nl>

START PAGE <http://home.luna.nl/~ary>

I received a very interesting note just before publishing time. Thanks for sending it !!!

Apparently it is possible to request documents from archives of the Polish Communist Secret Services. One of the documents that was found was a contract and instructions for an agent for his trip to Switzerland which included communications instructions with addresses where to send mail with code words, protocols for warnings and other messages, schedules for face-to-face meetings if such were required and something of interest to us: a list of shortwave frequencies and transmission schedules for communications to him. This was probably one of the well-known numbers stations.

The document was dated 1976-06-11. The relevant text and the translation is mentioned below. The square brackets are some footnotes:

'2.2 Po otrzymaniu kodem 1.2 informacji o gotowosci "Jote" do pracy, Centrala bedzie wysylac szyfrowki zawierajace wytyczne lub polecenia. Depesze te beda nadawane w trzecia srode i czwartek kazdego miesiaca. Ustala sie nizej podane terminy i fale radiowe dla tych depesz, ktorych znakiem rozpoznawczym bedzie melodia polki z pozytywki:'

'2.2 After receiving the code 1.2 [1] informing about the readiness of "Jote" [2], The Central [3] will be sending coded messages containing guidelines or orders. The Messages will be transmitted on the third Wednesday and Thursday each month. Below are the times and frequencies for those messages whose signature will be a polka melody from a music box:'

[1] code 1.2 is a letter sent to a fake person where one of the first few sentences had a phrase in German, a letter he was supposed to send after arranging a place to live, a radio receiver and a photo lab.

[2] "Jote" is most probably the code name of the agent.

[3] This is how the communist Polish Security Services refer to themselves in all documents.

Day of week	Hour	Frequency kHz	Frequency kHz
		Winter (from Sep. 1)	Summer (from Mar. 1)
Wednesday	00:00	8194	6507
	03:00	6507	5733
	18:00	11525	8194
Thursday	00:00	8194	6507
	03:00	6507	5733
	17:00	11525	8194

The station that is mentioned could be the Swedish Rhapsody because of the polka from a music box (at least it sounds like this). 6507 kHz is a matching frequency.

A second document about the same agent mentions "'Because of changed allocations of radio frequencies on which we are authorized to operate, please inform your agent [...]. Frequencies changed from 8486 kHz to 8488 kHz, 7582 kHz to 7584 kHz, 5742 kHz to 5748 kHz'. The document has the timestamp 1987-09-28.

It might be interesting to find out if there is more in the archives that is related to numbers stations. I have no idea how difficult it is to retrieve these documents but if you can, maybe you can try to check them out.

Finally a question:

Who can identify this station? I guess that it was the Swedish Rhapsody but as I do not have frequencies and schedules from that period I cannot check them myself.

What else do we have for you? Except for the usual logs and numbers transcripts you will find an enormous amount of Russian navy and air force logs. Thanks to Tony, Tom, Wolfgang, Gwapse and other dxers for all these logs.

VOICE STATIONS



E06

5731 kHz, 19-07, 2030 UTC: 57896 (long pause) 01324 each repeated some 5 times



E07

E07a, 24-07, 8173/7473/5773 kHz, 24-07, 2000/2020/2040 UTC:

147 1 60108 456 96
15747 24046 99981 00242 24805 19924 87952 93247 01914 93427
42767 48326 62255 18523 73293 28047 92312 43356 52859 03699
23312 37507 42534 56753 59979 92311 78751 97973 03838 87496
37278 77866 92032 89432 73411 85291 42165 97415 48038 98858
88402 08802 42870 10722 19597 07253 63567 44711 33410 22679
55183 34487 77049 47028 41706 19355 80919 21018 44109 02108
20044 51644 71919 49309 07584 18930 76468 82676 53487 72285
36228 90118 36581 74996 07922 49731 68387 38879 28606 01312
02880 04261 44007 04082 80088 62433 42202 39563 26615 90139
98734 58901 23171 33285 22495 94242
000 000

E07, 11413/10113 kHz, 26-07, 1530/1550 UTC:

241 1 13037 7509 54
55597 34613 87626 53420 54746 62556 76449 93365 21558 68407
89352 93211 48546 98705 82915 17634 15229 31686 35248 07257
06055 95345 48449 57?75 70627 62848 25317 18224 30291 60931
14338 26156 36202 06909 40989 47398 96950 07546 67684 58404
01212 19289 59975 93120 19316 01040 52312 18061 06176 95094
98138 13930 14003 88988
000 000

8173 kHz, 31-07, 2000 UTC:

147 1 13824 6179 61
41174 96720 05306 45592 75985 83839 94774 37533 31637 39413
22832 39107 47181 77594 32073 39876 29230 56395 05651 47191
05791 41409 76712 78506 21515 76675 56289 97193 73348 62935
11247 15098 25050 64091 34051 42914 78119 84227 86175 94595
11066 76272 47456 03034 60562 44423 02747 47561 46555 89242
02693 33312 86405 88465 79921 95218 41147 60439 47444 33733
79574
000 000

13898/12198 kHz, 24-07, 1700/1727 UTC:

817 1 294 192
39551 40669 17475 08363 72267 25269 91938 91272 36005 50311
48874 75642 49264 31919 17258 64181 33159 65615 22757 77478
66258 32129 28038 09250 72241 74399 89919 72682 13026 74064
57978 45139 11683 03577 27525 61264 04483 17786 95703 89796
96697 48208 50561 16360 61481 34258 59085 92704 94113 57939
41408 92474 73665 89146 51493 48560 87209 91281 27725 13156
69258 36843 74004 77968 30065 23390 85912 89133 24092 03093
85930 19445 97343 63384 95611 74137 46950 29588 85559 10421
48602 61803 50888 51282 79774 91442 47865 73050 87905 21987
72089 61708 28293 40042 43995 73973 87466 10661 74507 56680
22741 74395 72041 33678 24877 31948 04490 93343 96865 24842
30984 63981 99410 38337 99544 37304 29946 77961 89059 16552
16704 29805 74311 82711 74965 01930 46176 34596 36458 11837
92086 04844 05869 37421 37618 62265 96377 90880 54718 68619
47970 33511 92190 28404 02327 17622 30818 97585 58607 72080
50066 66052 13460 97826 86644 44141 21758 56479 27297 31399
58737 82278 44444 24208 18950 67897 03529 90728 46457 80975
12864 14258 32706 15396 23286 09538 05243 09749 09066 48636
31793 60041 62053 58280 70706 32311 79985 56177 43942 95606
29506 67171
000 000

E11/E11a

9610 kHz, 24-07, 1045 UTC:

466/35 Attention
28402 72093 24260 31628 25645 19231 66136 39402 03356 84676
15743 83775 85107 10648 75468 17866 67712 44405 24517 49226
50069 03973 78607 06717 24391 24261 28739 72861 16359 48873
44861 16197 64305 16639 18157
Attention, rpt msg, out

10487 kHz, 26-07, 1710 UTC:

951 20 Attention
25991 34420 24164 87667 99229 16275 04918 72449 06377 66635
56752 57737 01505 04703 17450 61975 26669 36145 27130 32116
Attention, rpt msg, out

8088 kHz, 25-07, 1730 UTC:

415 30 Attention
65255 41971 80213 12384 91151 56518 48302 25013 57929 41844
88286 76887 48568 92508 49462 89711 86253 00139 27551 08609
25784 86008 69836 15880 75860 88038 41368 13262 85121 46230
Attention, rpt msg, out

16388 kHz, 29-07, 1110 UTC:

956/34 Attention
74880 80714 90504 61045 53169 56137 10808 01570 45480 42250
43770 06950 41346 79871 81636 34634 92085 10607 18100 98544
49475 65326 60234 11919 38715 05122 89355 36259 23615 24955
68500 76075 96282 68846
Attention, rpt msg, out

13427 kHz, 31-07, 0900 UTC:

533/30 Attention
78875 75643 15590 14257 40003 76720 75301 40902 08959 00474
78418 89225 79391 80494 97969 42762 38410 10582 25793 55655
64611 40860 54058 19955 02596 41090 58152 65201 79442 19586
Attention, rpt msg, out



EV02 - US military Voice Loop

7345 kHz, 23-07, 1555 UTC, LSB: Mark Twain story being read with a break every few sentences.

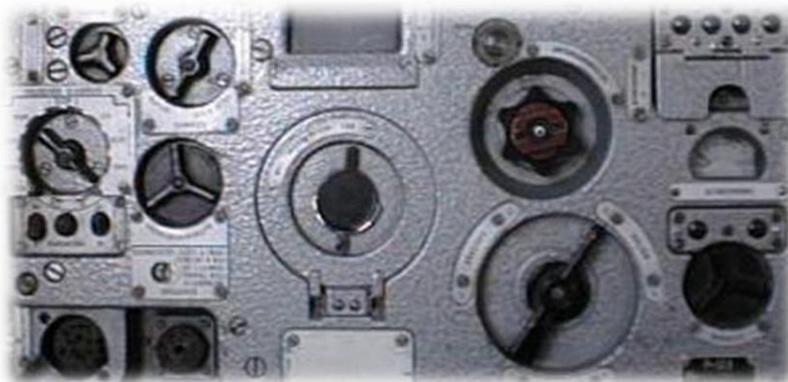
See the EV02 profile on the N&O website for more details.



G06

5943 kHz, 26-07, 1930 UTC:

218 987 15
72819 73234 56371 83241 99356 73267 99473 00779 37481 98234
78192 33465 72910 88352 89110
987 15 00000



Soviet P-123-M radio



S28 - The Buzzer

Mode: USB
Frequency: 4625 kHz

04-07, 1236 UTC: MDZhB 45 023 NADUMANNYJ 48 80 45 65 Priyom
08-07, 0955 UTC: MDZhB 19 545 KADMIEVYJ 87 38 11 21 Priyom
08-07, 0959 UTC: MDZhB 78 664 GADZHENJE 37 83 02 24 Priyom
08-07, 1005 UTC: MDZhB 91 316 SADZHA 58 59 44 45 Priyom
08-07, 1010 UTC: MDZhB 23 312 NADGIBKA 23 20 54 97 Priyom
15-07, 0456 UTC: MDZhB 4925 VERKhOVShChIK
22-07, 0835 UTC: MDZhB 03 178 MAGAYuR 54 02 22 91 Priyom
22-07, 0837 UTC: MDZhB 31 628 GAVYuLA 87 56 78 78 Priyom
24-07, 0831 UTC: Voice under buzzer. Radio check
24-07, 0933 UTC: MDZhB 20 336 ZAVODSKOJ 51 29 93 68
25-07, 1028 UTC: MDZhB 39 985 PILIP 05 00 95 21
29-07, 1030 UTC: MDZhB 59 333 SKABOLKA 93 29 06 51

Recording on the N&O website. You'll hear how this recording starts seconds after the voice transmission begins, this is because the operator was actually reading it before he turned the mic on! Buzzer went off and immediately he was at 'Zhenya' of the first calling of callsign.



RMv/RNv/RNAv/RAv/RADv

Russian military stations

Frequency: various
Mode: LSB / USB / voice

Below a selection of the logs.

RADv:

4831 kHz, 06-07, 2245 UTC: Most probably Russian Air Defense. Sending targets, speeds, and coordinates.
4207 kHz, 17-07: Possibly Russian Air Defense. Radio location data
4207 kHz, 16-07: Possibly Russian Air Defense. Radio location data
4250.1 kHz, 17-07: Possibly Russian Air Defense. Radio location data
5680 kHz, 16-07, 2006 UTC: OM, Russian, broadcasting series of numeric groups (poss tracking/positional data?).
Example: 91st 67 65 at 13 (on correct minute)

RNAv

11354 kHz, 16-07, 1050 UTC: Priboj (Naval Air Transports Central Sector, Moscow) w/52847 (Russian Navy AN-26) reporting passing point (missed) at altitude 5800 mtrs w/fuel 3100 kgs. Priboj relays flt info to Novator (Naval Air Transports Northern Sector, Murmansk)
11354 kHz, 16-07, 1129 UTC: Priboj w/52903 (Russian Navy AN-26) reporting passing point (?NAMOT?) at 1412 MSK at altitude 1900 mtrs. Reporting fuel for 4 hour flt.
11354 kHz, 16-07, 1136 UTC: Priboj (caught in progress) w/52847 (Russian Navy AN-26) reporting landing at Rostov-na Donu at 1136 UTC. (2013/07/16 RP-MD)

RAv

11360 kHz, 11-07, 1230 UTC: Korsar w/86855 reporting ETA at Cedar (Bryansk AB) 1600 MSK accoording to plan OTP
11360 kHz, 16-07, 1611 UTC: Korsar (Russian AF 334th Military Transport Aviation Regiment Pskov) w/09329 (AN-22) reporting fuel 24 tons.
11360 kHz, 22-07, 1501 UTC: Korsar w/76724 (IL-76MD) reporting departure from Dorozhnij, flt alt 2700 mtrs, cargo 21 tons and passing point (1 word missed) Karlinskaya
11360 kHz, 22-07, 1131 UTC: 78794 (IL-76MD): 1131 USB calling Klarnetist no response.
11360 kHz, 15-07, 1138 UTC: 78840 (IL-76MD): 1138 USB w/Chakalovskij reporting landing at (?Bilbets?).
11360 kHz, 25-07, 1200 UTC: Korsar w/radio checks w/Klarnetist; Proselok; Polis; and Davlenie)
8909 kHz, 25-07, 2245 UTC: Ochitska :2245 USB w/79748 (poss TU-95) w/formatted 3-figure msg 970/686/792/895/904/ (missed). At 2335 USB w/Ochitska w/ 2 msgs 748/790/449/349/727/704 & 394/907/034/755/033/432. At 2345 w/Ochitska w/msg 970/907/274/786/371/694

8909 kHz, 25-07, 2250 UTC: Ochitska: 2250 USB w/79743 (poss TU-95) w/msg 970/786/254/537/397/601. At 2318 w/Ochitska w/ msg 970/790/284/315/371/462. (2013/07/25 RP-MD)
8909 kHz, 25-07, 2252 UTC: Ochitska: 2252 USB w/78166 (poss TU-95) w/msg 722/786/944/414/397/601. Also called PROCELKA (unid-assoc w/Russian Strategic Forces) w/no response. At 2315 w/Ochitska w/msg 722/790/946/633/371/996. At 2347 w/Ochitska w/msg 722/907/946/904/371/794.
8909 kHz, 25-07, 2320 UTC: Ochitska: 2320 USB w/(?30?)975 (unid) w/msg 862/030/676/646/466.

RMv

5741 kHz, 16-07, 1819 UTC: (1 word missed)-45 (OM Russian) w/Pompei-50 in radio checks. Sounds like naval vessels.
5741 kHz, 16-07, 1830 UTC: Folka-97 (OM Russian) w/(missed)-22. Folka-97 also w/Panmoy/Polmoy-96.
5741 kHz, 16-07, 1944 UTC: Folka-97 calling Pola-92 for radio checks. Also calling Panmoy/Polmoy-96 no response.
5741 kHz, 16-07, 1950 UTC: Folka-97 w/Primoy-96

4840 kHz, 24-07, 1445 UTC: Prizma-41 to Pejzazh-32: ZYO ZD' SHCHYT 4
(Zinaida Kratkij Olga, Zinaida Dmitrij Znak, ShChuka Jery Tatjana Chetverka = in Russian: ЗЫО ЗДЬ ЩЫТ 4)
Pejzazh-32 to Prizma-41: "Кодировка ясна. Работаем. Как слышно? Прием". = Coding [type] is clear. Let's work. How can you read me? Over
4593 kHz, 29-07, 1040 UTC: i.p. ...63 05 97 97 53 Kak prinyali? Priyom. Na svyazi, priyom.
(...63 05 97 97 53 How did you receive me? Over. I'm in communication, over)



UMv - Ukrainian Military

6767.5 kHz, 24-07, 0855 UTC:

Kolos-56 works with Shtanga-01.
Kolos-56 speaks in Russian, no accent.
Shtanga-01, 1st operator: speaks in Russia with a Ukrainian accent; 2nd operator: speaks in Russian, no accent.
Shtanga-01 asks Kolos-56: "Получайте мое считывание" = Two meanings are possible: (1) [Please] receive my counting; (2) [Please] receive my reading [or playback] [of data, etc.].
Kolos-56 receives in 2-3 units (signal quality).
Shtanga-56 asks Kolos-65 to re-tune "thirties" to the main frequency.



V07

13582/12182/10282 kHz, 14-07, 0700/0720/0740 UTC:

512 512 512 1 512 512 1 512 512 512 1 512 512 512 1 512 512 512 1
525 93 525 93
2533? 0531? 0802? 52301 31780 82587 81232 28083 75667 3313?
78833 50324 38120 88480 82041 27033 58140 83948 82239 23257
11225 37333 038?1 78188 83282 33793 38943 88137 44338 03043
12398 07308 19879 97577 33928 39215 54888 29833 53328 11870
81972 71825 45493 28045 98315 42538 17757 01319 80037 70392
81023 28912 94303 35157 84197 38940 92244 44425 8703? 72310
04701 91303 53787 29932 93033 78497 14820 ?1023 98054 22170
77778 97700 87013 31098 35900 23335 ?3815 42432 84204 33589
70234 22337 33734 09500 40375 21820 99523 40320 34321 21?14
75743 77284 533?9
000 000

12182 kHz, 0720 UTC:

512 512 512 1 512 512 1 512 512 512 1 512 512 512 1 512 512 512
539 63 539 63
82471 33081 51244 87231 70225 95331 40413 52157 72009 23534
35779 13807 34973 08792 10510 10519 33787 13001 88829 33720
08327 1231? 33373 91459 38119 48285 84533 33248 12343 71813
83893 72032 88185 33398 70803 03323 13838 30739 84034 50289
77330 11884 8738? 00003 85280 82081 89907 1?333 08730 02980
03782 53390 30895 05413 39873 84341 41133 08389 33897 51750
31123 77134 95417
000 000

13582 kHz, 28-07, 0700 UTC: 512 512 512 000



V13 - New Star Broadcasting Station

星星廣播電台 Xīngxīng guǎngbò diàntái

Station #3: 13750 kHz, 0500 and 0600 UTC

Station #4: 15388 kHz, 0700 and 0800 UTC

Station #4: 13750 kHz, 1200 and 1300 UTC



VC01 - Chinese Robot

Chinese Air Defense

Modes: USB and LSB

The station changes its frequencies frequently. Known frequencies:

3036, 3749, 3837, 4075, 4258, 4343, 4410, 4422, 4427, 4480, 4530, 4580, 5195, 5232, 5288, 5303, 5328, 5330, 5393, 5422, 5592, 5700, 5742, 5802, 5832, 6209, 6479, 6771, 6840, 6858, 6860, 6949, 6960, 7090, 7351, 7608, 7684, 7726, 7739, 7744, 7756, 7770, 7792, 7864, 7865, 7880, 7890, 7924, 7938, 8000, 8025, 8170, 9000, 9169, 9192, 9290, 9340, 10508 kHz.

Again no reports. I guess that it's gone.

MORSE STATIONS



MX

Russian Military beacons

Current cluster frequencies:

3594, 4558, 5154, 7039, 8495, 10872, 13528, 16332, 20048 kHz

Other frequencies:

L 6917.5, 8497.8 kHz

V 3658, 4150, 6809, 6928, 7027.5 kHz

R 5466 kHz (seldom reported these days)

W 5835, 8112, 8162, 8345 kHz (Air Force)

Cluster beacon slots:

.7 "D", Sevastopol

.8 "P", Kaliningrad

.9 "S", Severomorsk

.0 "C", Moscow

.1 "A", Astrakhan

.2 "F", Vladivostok

.3 "K", Petropavlovsk Kamchatskiy

.4 "M", Magadan

Reported beacons and channel markers.

European Cluster Beacons: D, P, S, C, A, L ("A" not reported)

Asian Cluster Beacons: F, K, M

Channel markers:

V: 4505.5 kHz. Sends continuous "5" instead of a "V" on 8 July and "I" on 14 July. Sends "Z" and "B" on 19 July

V: 4150 kHz

W: 8345, 8895 kHz



M01

3612 kHz, 16-07, 2306 UTC: M01a i.p. 619 10 =
33533 52440 03561 1..20 64244 71616 86080 55772 79652 30226 =
619 10 111 000

5466 kHz, 05-07, 1902 UTC: M01b 336 121 35 =
39863 58619 90843 13026 45950 01008 90179 70258 54507 55494
51849 96269 32731 77667 93112 14330 19154 91911 48430 67066
40934 66906 82222 76503 99914 49240 57331 77124 54555 53339
51110 12809 74082 40713 53391
= 121 35 000



M14

10424 kHz, 07-07, 1603 UTC: Missed the callup 342 342 57 57 = =
49893 22658 37358 36739 45603 87420 97611 47079 76926 13554
327.. 30239 52328 05276 48443 11162 57724 73184 77703 31321
54271 66993 63737 54554 76266 08748 44586 85096 90074 31226
63899 15011 00033 51198 55995 43202 1.257 32240 78662 33197
92309 16777 921.8 01885 77638 32057 07836 56400 30747 99782
54839 21338 44021 03903 38295 23491 32158 = =
342 342 57 57 00000

6856 kHz, 09-07, 1820 UTC: 163 534 15 = =
37134 92734 01638 93277 92015 83913 02581 83913 09647 82557
73910 82945 93012 03221 72910 = =
534 15 00000

10756 kHz, 15-07, 1704 UTC: 975 975 975 862 862 51 51 = =
11893 54819 62807 81362 51419 34126 64895 05419 68989 54420
58556 84577 68565 18783 50575 84683 13875 93584 86458 76471
49917 34753 75496 29744 17140 77408 32730 91835 87979 37330
79990 61628 80457 97661 73216 94859 28508 79322 48220 01722
13737 18534 02106 22689 88287 99923 52513 93497 43517 18625
41886 = =
862 862 51 51 00000



M18

4503 kHz, 18-07, 1908 UTC: 2311 2311 2311 2311 ...



M21 + variants *Russian Air Defence Forces* **Войска ПВО Voyska PVO**

Id 0: 3246.5, 5221.5 kHz

Id 8: 5356, 6422, 9367 kHz

=991535??8?????? =991544??8?????? =26504701040200 =16501249577644 =26501702080815 =991545??8??????

=991053??8?????? =991054??8?????? =216236543386852 =162365433864 =1623554399554 =26235601030502

=991056??8?????? =169675439900 =2686770110100

=990319??0??????



M32 *Russian/CIS/Ukrainian* **Military CW Stations**

10435 kHz, 07-07, 1237 UTC:

i.p. 342 K
FA8M 780 29 6 .635 780 =
ZKW 444 =
0816 8387 9991 6866 5125 2566 5548 9599 4427 7642
5550 9247 7818 2652 5807 2284 6388 2796 7293 6792
2974 5919 9491 6019 7818 0625 342 K
FA8M QRU QRV K K

5881 kHz, 23-07, 0500 UTC:

XXX XXX RCD95 RCD95 RJU55 RJU55 83458 DETURID 4032 4054 K

5881 kHz, 24-07, 0940 UTC:

XXX XXX REO REO 68740 DIEZNYJ 4580 3839 K

4835 kHz, 22-07, 1209 UTC:

XXX XXX ShchMCK ShchMCK 78714 BOLEIT 0574 3883 K

3772 kHz, 30-07, 0143 UTC:

XXX XXX PABA PABA KORWET375 KORWET375

4612 kHz, 07-07, 2000 UTC:

VVVV Y8SD Y8SD Y8SD
Y8SD Y8SD Y8SD K
Y8SD R QSA 1/? K
Y8SD QSV K
BK BK
Y8SD QTC ZZ K
Y8SD 235 30 8 0005 235 =
ZZY .84 =
Y'UMPZ WPK.D BU'OAM BMM.. (Cont'd)

10435 kHz, 07-07, 1237 UTC:

342 K
FA8M 780 29 6 .635 780 = ZKW 444 =
0816 8387 9991 6866 5125 2566 5548 9599 4427 7642
5550 9247 7818 2652 5807 2284 6388 2796 7293 6792
2974 5919 9491 6019 7818 0625 342 K
FA8M QRU QRV K K

6822 kHz, 07-07, 1018 UTC:

VVV
GMJX DE Q1ZZ K
GMJX K
R K
WENI DE Q1ZZ K
OIVQ DE Q1ZZ K
OIVQ K OIVQ K
RPT K
OIVQ K
R K
T83Q DE Q1ZZ K
T83Q K
RPT K
T83Q K
R K
8RAP DE Q1ZZ K
8RAP K
R K
1L7K DE Q1ZZ K
1L7K K
WENI DE Q1ZZ R K
DE Q1ZZ K
4HVV DE Q1ZZ K
4HVV K
SH.P DE Q1ZZ K
SH.P K
R K



M32a *Russian Navy* *Voyenno-Morskoy Flot Rossii*

10544 kHz, 07-07, 1245 UTC:

RGX94 DE RCV QTC 982 61 6 1420 982 = NAWIP 036 1437 KARTY 31035 31036
POBEREVTE III 31035 31036 POBEREVXE FRANCI PODWODNYE RABOTY 12 PO
14 \ULDX SUDNOM TET HYS II RAJONE 43/20S 006/55 W 43/40S 007/33W
(Cont'd)

8345 kHz, 01-07, 0005-0017 UTC:

VVV RCV DE RCJG QSA? QTC
RCJG 757 18 1 0400 757 = SML FOR RJH45 RJE73 =
01001 99446 10334 22200 (44.6N 33.4E hove to Sevastopol)

VVV RCV DE RKB91 QSA? QTC
RKB91 992 16 1 0401 992 = SML FOR RJH45 RJE73 =
01001 99369 10019 22222 (36.9N 01.9E Heading East @ 6-10kts)

VVV RCV DE RBIZ

3772 kHz, 29-07, 2338 kHz:

I25V DE SMKK QTC
I25V DE SMKK QTC
I25V DE SMKK QTC

SMKK 975 63 30 0235 975 = 636 085 241 = AAAAA JKHTÜ TChXUV YAEWÄ
BKQNÄ WXVVJ JSPRD ÖÜGYY ÄÄWChn ChBPÖC MUGEG LJYWT QKHXW
ChBTHQ JNW Hö CKXÜX GYVLK ÖUÄÜCH ChÄWHCh ÖUVRB LZTRG MMLED
CYÜUY GKGOV PTCJT TChGMH ChÜÖMR TChÄBO YÜFUG DCYEE KChÖTCh
ÜGNChW GNTQV LGKQY BNWChA DÖUVK ÜChTPC JREÜC GZREQ NÖÖOE
BPOKF TÖPChQ KHFMR ÜQZCZ FPCBU EQOJJ NBLKCh GJLBT TUGZCh GJJLV
HÜHHT RAZCW ÖOKChG MMFMS LVZFM TCKÖÖ OJPUE GZSÖS SYEXX TÖRGM
WKKEK K

9470 kHz, 22-07, 1247-1300 UTC:

This one is seldom reported. Additional info is most welcome.

UAA UAA UAA 09740 09740 rpt
UAA UAA UAA 02600 02600 rpt
UAA UAA UAA 02190 02190 rpt
UAA UAA UAA 00036 00036 rpt
UAA UAA UAA QSY BK QSL1 NIL SK UAA UAA UAA SK

5412 kHz, 28-07, 2037 UTC:

Unid, possibly Russian military. I heard a transmission at ca 2030 UTC and stayed on the frequency. This message started at 2037 and ended at 2039 UTC. The last sound was transmitted about 2 minutes later. Nothing after that.

It used several Cyrillic characters. Hand keyed. Both JPL and me listened to this. We both heard the same. Weird message. The recording is online.

Yu --- Ch --- and Sh ---- are the Cyrillic characters.

Message: YuH GCH AZFX JKPR S D U U ChHHG CChBPPM CHS I JFJSh YBM
T I KNNI BFIB O X

8345 kHz, 04-07, 0001-1502 UTC:

VVV RCV DE RCJG QSA? QTC
RCJG 382 18 4 0400 382 = SML FOR RJH45 RJE73 =
04001 99403 10266 22252 (40.3N 26.6E heading SW @ 6-10kts)

VVV RCV DE RBIZ QSA? QTC
RBIZ 974 17 4 0400 974 = FOR RJE73 RJH45 =
04001 99349 10358 22200 (hove to Tartus)

RCV DE RKB91 QSA? QTC
RKB91 665 16 4 0401 6 (stopped)
RCV DE RCJG QSA?
RCV DE RCJG AR 923 RPT 516
RCJG R

RCV DE RKB91
RKB91 RPT 665 16 4 0401 665 = SML FOR RJH45 RJE73 =
04001 99359 10148 22200 (35.9N 14.8E hove to Malta)

VVV RCV DE RKB91 QSA? QTC
RKB91 717 34 4 0501 717 = SML FOR RCV RMP RIW =
11111 20799 04028 = AR RKB91

VVV RCV DE RCJG QSA? QTC
RCJG 293 98 4 0545 293 = SML FOR RJT22 =
77020 38056 71240 04095 = AR RCJG

VVV RCV DE RCJG QSA? QTC
RCJG 764 15 4 063 (stopped)
RCJG OK QSX 5984
RCV DE RKB91 QSA3
VVV RCV DE RJT22 QSA?

12464 kHz, 04-07, 1203-1315 UTC:

RKB91 ????? = SML FOR RJH45 RJE73 =
041?1 99359 10148 22200 (35.9N 14.8E hove to Malta)

VVV RCV DE RCJG QSA? QTC
RCJG 890 ?? 4 1600 890 = SML FOR RJ45 RJE73 =
04?23 99385 10249 22252 (38.5N 24.9E heading SW @ 6-10kts)

VVV RCV DE RMYZ QSA? QTC
RMYZ 541 18 4 1600 541 = SML FOR RJE73 RJH45 =
04121 99395 10256 22252 (39.5N 25.6E heading SW @ 6-10kts)

RMYZ 82694 ORWAGIL 8108 8400
RCJG 82694 ORWAGIL 8108 8400
RCV DE RMYZ QSA3 QRV
RCV DE RCJG QSA2 QRV
RMYZ QSL 972
RCJG QSL 972

12464 kHz, 05-07, 1214-1650 UTC:

RCV DE RMYZ QSA? QTC
RMYZ 244 18 5 1610 244 = SML FOR RJE73 RJH45 = 05121 99364 10228 222???

RCV DE RJT22 OK QYT4 QWH 11429/8338 QSX 9344/10984

VVV RCV DE RMYZ QSA? QTC
1410z RMYZ 991 49 5 1805 991 =
54986 88480 98181 46428 02714 93209 80228 54455 04252 06008
53799 34065 00154 83913 81180 16288 16318 14579 54455 33629
53674 56820 53822 11661 46701 31289 35939 82663 14153 99322
54849 87947 93154 74539 97835 88454 73197 77812 69802 19675
24298 85584 83907 43033 20342 32843 84158 06029 05042 = + RMYZ

RCV DE RKB91 QSA?
RKB91 OK QSU1 QWH 8734 QSX 8204

8345 kHz, 05-07, 1801-1806 UTC:

RCJG 835 18 5 2200 835 = SML FOR RJH45 RJE73 =
05181 99360 10228 22200 (36.0N 22.8°)
Vvv RCV DE RMYZ QSA? QTC
RMYZ 238 18 5 2202 238 = SML FOR RJE73 RJH45 =
05181 99362 10217 22252 (36.2N 21.7E heading SW @ 6-10kts)

VVV RCV DE RBIZ
RBIZ 05181 99349 10358 22200 (Hove to Tartus)

8345 kHz, 17-07, 0001-0247 UTC:

VVV RCV DE RMYZ QSA? QTC
RMYZ 211 18 17 0400 211 = SML FOR RJE73 RJH45 = 17001 99398 10256
22200

VVV RCV DE RKB91 QSA? QTC
RKB91 795 16 17 0400 795 = SML FOR RJH45 RJE73 = 17001 99340 10322
22232

RIW DE RJT22 OK QYT4 QCM

VVV RCV DE RMYZ QSA? QTC
RMYZ 341 52 17 0501 341 = 00704 85778 71145 17051 = + RMYZ (52fg message)
VVV RIT DE RGR35 QSA?
VVV RCV DE RGV82 QSA?
RCV DE RGV82 QYT4 QSX 12753

8345 kHz, 07-07, 0002-0215 UTC:

VVV RCV DE RCJG QSA? QTC
RCJG 408 18 7 0400 408 = SML FOR RJH45 RJE73 =
07001 99361 10200 22263 (36.1N 20.0E heading W @ 6-10kts)

RCV DE RBIZ QSA? QTC
RBIZ 998 17 7 0400 998 = FOR RJE73 RJH45 =
07001 99349 10358 22200 (Hove to Tartus)

RCV DE RMYZ QSA? QTC
RMYZ 341 18 7 0400 341 = SML FOR RJE73 RJH45 =
07001 99362 10160 22262 (36.2N 16.0E heading W @ 6-10kts)

VVV RCV DE RKB91 QSA? QTC

VVV RCV DE RCJG QSA? QTC
RCJG 295 27 7 0415 295 = SML FOR RJT22 =
229?4 30912 005?? 61988 02131
21107 51136 35446 90147 57540
41??2 18508 43986 55009 37664
42588 71971 32898 06364 64049
56115 3?031 46606 31637 07024
= + RCJG

VVV RCV DE RMYZ QSA? QTC
RMYZ 271 28 7 0417 271 = FOR RJT22 =
42166 65203 70149 82766 63774
54500 75072 95075 75557 05570
36696 26016 70585 71548 67788
24365 02124 74321 33754 17306
28959 30680 84803 00170 11962
56451 07026 = + RMYZ

VVV RCV DE RCJG QSA? QTC
RCJG 129 73 7 0500 129 = SML FOR RJT22 =
75737 17449 33671 68632
07070 = + RCJG (73 5fg message)

RMYZ 845 49 7 0601 845 =
76157 22521 47244 66802 07048 = + RMYZ (49 5fg message)

8345 kHz, 13-07, 0002-2320 UTC:

VVV RIW DE RJT22 Z?
VVV RCV DE RMYZ QSA? QTC
RMYZ 765 18 13 0400 765 = SML FOR RJE73 RJH45 =
13001 99??3 10247 (stopped)

VVV RIW DE RJT22 QSA?
RMYZ RPT 13001 99383 10247 22212 (38.3N 24.7E heading NE @ 6-10kts)

VVV RCV DE RBIZ QSA? QTC
VVV RCV DE RKB91 QSA? QTC
RKB91 671 16 13 0400 671 = SML FOR RJH45 RJE73 =
13001 99360 10228 22200 (36.0N 22.8E)
VVV RMP DE RFK99 QSA?
RMP DE RFH61(stepped on by RFK99)
RMP DE RFH61 OK AS3
RMP DE RFK99 QSA4 AS1
RIT DE RFH61 QYT4 QSX 5928 NO
RIT DE RFH61 QYT4 QSX 8599 OK?
RCV DE RIR96 QSA?

8345 kHz, 11-07, 2240-2301 UTC:

RCV DE RIR96 QSA?
RIR96 OK QYT4 QWH 6302
RCV DE RIR96 QYT4 QSX 6912
RMP DE RFH61 QYT4 QSA NO WRK
VVV RMP DE RFH61 QSA? QTC
RFH61 101 18 12 0322 101 = SML FOR RIF4 RJD38 RJH45 = 12001 99533
10033 22252

8345 kHz, 10-07, 0002-2357 UTC:

VVV RCV DE RCJG QSA? QTC
Vvv RCV DE RKB91 QSA? QTC

RCJG 601 1810 0400 601 = FOR RJH45 RJE73 = 10001 99368 10007 22263

RKB91 642 16 10 0401 642 = SML FOR RJH45 RJE73 = 10001 99360 10228 22200

RCV DE RMYZ QSA? QTC

RMYZ 831 18 10 0400 831 = SML FOR RJE73 RFH45 = 10001 99363 10153 22232
(36.3N 15.3E heading SE @ 6-10kts)

VVV RIW DE RJT22 QSA?
RIW DE RJT22 QYT4 QSX 12872
Vvv RMP DE RFH61 QSA? QTC

RFH61 550 18 1009 55(sic) 550 = SML FOR RIF?? RJD38 RJH45 = 10061 99579 10101 (signal lost)

RMP DE RFH61 RPT 22272 (57.9N 10.1E heading NW @ 6-10kts)

RMP DE RFH61 OK QYT4 QSX 4158 (continues QYTing)

RMP DE RFH61 OK QYT4 QWH 5764
(RFH61 and RJT22 step on each other then, both trying to QYT)

Vvv RMP DE RFH61 QSA? QTC

RFH61 115 18 10 1525 115 = SML FOR RIF4 RJD38 RJH45 = 10121 99576 10089 2227?

VVV RMP DE RFH61 QSA? QTC
RFH61 618 18 10 2015 618 = SML FOR RIF4 RJD38 RJH45 = 10151 99574 10081 22252 (57.4N 08.1E heading SW @ 6-10kts)

VVV RIW DE RJT22 QSA? QTC
Vvv RIW DE RJT22 QSA?
RIW DE RJT22 QYT4 QSA?
RCV DE RCJG QSA? QTC

RCJG 302 27 11 0320 302 = SML FOR RJT22 = 55412 20649 25193 83703 59189 09060 91990 46736 76479 88442 99974 16721 24397 83745 55806 51888 75889 47421 19617 16348 74384 33980 55782 67894 11024 = + RCJG

8345 kHz, 15-07, 0007-0510 UTC:

RKB91 61? 18 15 0400 61? = ??? ??? RJH45 = 15001 99398 10256 222?? (39.8N 25.6E)

VVV RMP DE RFH61 QSA? QTC
RFH61 123 18 15 0345 123 = SML FOR RJH74 RJD38 RJH45 = 15001 99434 70099 22252 (43.4N 09.9W heading SW @ 6-10kts)

VVV RCV DE RMYZ QSA? QTC
RIW DE RGV82
RMP DE RFH61 QTY9 QSX 10308 FOR RIT
RFH61 OK AS2
RMP DE RFH61 QYT9 QSX 13938 FOR RIT
RFH61 OK AS2
RIT DE RFH61 QSA?
(RKB91 sends 5fg message) 43214 20202 15032 = + RKB91

VVV RMP DE RFH61 QSA? QTC
RFH61 288 18 15 0910 288 = SML FOR RJH74 RJD38 RJH45 = 15061 99426 70101 22242 (42.6N 10.1W heading S @ 6-10kts)

8345 kHz, 16-07, 0001-0529 UTC:

RIW DE RJT22 QRR ZSV?

VVV RCV DE RMYZ QSA QTC?
RMYZ 931 18 16 0400 931 = SML FOR RJE73 RJH45 = 16001 99398 10256 22200 (39.8N 25.6E)

VVV RCV DE RMYZ QSA? QTC
RMYZ 328 52 16 0501 328 = 79264 07948 90942 16051 = + RMYZ (5fg message)

VVV RCV DE RKB91 QSA? QTC
RKB91 392 35 16 0500 392 = SML FOR RMP = 11111 92290 35974 16?? = + RKB91 (35fg message)

RMP DE RFH61 QYT9 QSA?

VVV RCV DE RMYZ QSA? QTC
RMYZ 803 18 16 0700 803 = SML FOR RJE73 RJH45 = 16032 99398 10256 22200 (39.8N 25.6E)

VVV RMP DE RFH61 QSA? QTC
RFH61 929 18 16 0930 929 = SML FOR RJH74 RJD38 RJH45 = 16061 99378 70091 22243 (37.8N 09.1W heading S @ 6-10kts)

12464 kHz, 15-07, 0609-1808 UTC:

RIW DE RKB91 319 16 15 1000 319 = SML FOR RJH45 RJD38 = 15061 99350 10264 41898 12905 10280 40100 51000 70202 8/// 22232 00250 15012 = + RKB91 K

RIW DE RJI63 294 75 15 1120 294 = FOR RIT RIW RCV 11111 20112 09372 19041 98796

RCV DE RIR96 QSA1 K
RCV DE RHL80 QSA? K - QYT4 QSX 12794 K
RMP DE RGV82 QSA? K
RCV DE RGV82 QSA? K

RCV DE RIR96 627 16 15 1300 627 = FOR RJE73 RJH45 = 15121 99367 10267 41598 60209 10270 40159 52100 76200 80000 22232 00240 21110 15013 = + RIR96 K

RJP99: 254 17 15 1005 254 = FOR RMSZ RJH74 = 15061 99639 10374 42598 73108 10104 40052 53031 861... 22232 ... 403 88000 .. = + RJP99 K

RCV DE RIR96 466 16 15 1856 466 = FOR RJE73 RJH45 = 15151 99361 10271 41598 03309 10320 40159 52100 70200 80000 22232 00250 21111 15013 = + RIR96 K

RCV DE RMYZ 842 18 15 1900 842 = SML FOR RJE73 RJH45 = 15151 99398 10256 41998 03418 10240 40140 54000 70200 8000 22200 00240 299// 399// 15014 = + RMYZ K

RIW DE RKB91 559 16 15 2200 559 = SML FOR RJH45 RJE73 = 15181 99355 10279 41698 23210 10250 40060 56020 70202 8/// 22232 00250 15012 = + RKB91 K

16680 kHz, 18-07, 1202 UTC:

RIW DE RFH61 302 18 18 1550 302 = SML FOR RJE73 RJD38 RJH45 = 18121 99369 10015 41518 40905 10260 40160 54000 70211 84100 22222 00190 20201 18013 = + RFH61 K

8345 kHz, 23-07, 0545-0605 UTC:

RCV DE RBIZ 208 17 23 1000 208 = FOR RJE73 RJH45 = 23061 99349 10358 41598 32306 10165 30039 58002 70100 83110 22200 10282 20000 88000 23014 = + RBIZ K

LS AZOV (151) : RCV DE RIR96 400 14 23 0935 400= FOR RJE73 RJH45 = 23061 99398 10856 41598 10307 10250 40157 32200 81000 22200 00246 23011 = + RIR96 K

8345 kHz, 03-07, 0005-2108 UTC:

VVV RCV DE RMYZ QSA? QTC?
 RMYZ 437 18 3 0400 437 = SML FOR RJ373 RJH45 =
 03061 99429 10310 22253 (42.9N 31.0E heading SW @ 11-15kts)

VVV RCV DE RBIZ QSA? QTC
 RBIZ 198 17 3 0400 198 = FOR RJE73 RJH45 =
 03001 99349 10358 22200 (hove to Tartus)

VVV RCV DE RKB91 QSA? QTC

RKB91 156 16 3 0401 156 = SML FOR RJH45 RJE73 =
 03001 99371 10117 22232 (37.1N 11.7E heading SE @ 6-10kts)

VVV RCV DE RCJG QSA? QTC
 VVV RCV DE RCJG QSA? QTC
 RCJG 141 18 3 0400 141 = SML FOR RJH45 RJE73 =
 03001 99427 10307 22252 (42.7N 30.7E heading SW @ 6-10kts)

RCV DE RCJG QSA? QTC
 VVV RCV DE RKB91 QSA? QTC

RKB91 966 37 3 0601 966 = SML FOR RCV RMP RIW =
 11111 12782 26190 19783 22584 83076 12?25 86105 60935 52823
 41666 34813 14285 01416 19970 77405 41428 69234 66805 87086
 95483 02604 59081 20517 25014 92217 84859 03800 39471 69789
 6296? 20300 03032 = AR RKB91

VVV RCV DE RMYZ QSA? QTC
 RMYZ 331 52 3 0605 331 =
 95707 54124 87080 38532 91802 98320 17529 88144 46047 26638
 17881 41069 21267 43878 15975 91566 76107 09481 86562 37228
 20346 32966 52494 23184 12910 33945 38555 49587 26725 67182
 63474 55384 16391 35861 41822 62886 50390 30785 85898 61082
 39977 07006 55335 70976 58079 52052 97655 24801 71644 20801
 71759 03051 = AR RMYZ

RMYZ 624 18 3 1002 624 = SML FOR RJE73 RJH45 =
 03121 99423 10298 22252 (42.3N 29.8E heading SW @ 6-10kts)

VVV RMP DE RFK99 QSA?
 RMP DE RFK99 QSA2 QYT4 QSA?
 RMP DE RFK99 OK QYT4 QSX 8338
 RMP DE RFK99 OK AS3
 RMYZ QSL 130
 RCV DE RMYZ RPT PBL
 RMYZ QSL 167
 RMP DE RFK99 OK QYT4 QSX 12370
 RMP DE RFK99 QYT4 QWH?
 RMP DE RFK99 OK QYT4 QWH 10464
 RMYZ QSL 171

RMYZ 286 18 2 2201 286 = SML FOR RJE73 RJH45 =
 02001 99436 10322 22252 (43.6N 32.2E heading SW @ 6-10kts)

RCV DE RKB91 QSA? QTC

RKB91 701 16 2 2200 701 = SML FOR RJH45 RJE73 =
 02181 99386 10106 22222 (38.6N 10.6E heading E @ 6-10kts)

RBIZ 118 17 2 2200 118 = FOR RJE73 RJH45 =
 02181 99349 10358 22200 (hove to Tartus)

RCV DE RCJG QSA QTC?
 RCJG 457 3 3 0010 457 = 58250 22345 03002 = AR RCJG

VVV RCV DE RMYZ QSA? QTC
 RMYZ 664 3 3 0100 664 = 58250 30005 03002 = AR RMYZ

VVV RCV DE RCJG QSA? QTC
 RCJG 389 28 3 2201 389 = SML FOR RJH45 RJE73 =
 03181 99407 10279 22252 (40.7N 27.9E heading SW @ 6-10kts)
 RCJG QSL 923

VVV RCV DE RCJG QSA? QTC
 RCJG 931 3 3 2228 931 =
 82530 32210 03002 = AR RCJG

VVV RCV DE RCJG QSA? QTC
 RCJG 706 15 4 0340 706 = SML =
 19161 18483 29047 83482 24523
 79223 51950 88719 31275 93104
 60292 81769 16233 04013 = AR RCJG

RCV DE RCJG
 RCJG QSL 923 NO
 RCJG OK QRU

8345 kHz, 18-07, 0619-1810 UTC:

RIT DE RLX92 126 16 18 1004 126 = SML FOR RJD38 RJH45 = 18061 99591
 10218 43699 96148 10180 40140 50005 70200 83/// 22212 1/// 18012 = +
 RLX92 K

RCV DE RBIZ 828 17 18 0400 828 = FOR RJE73 RJH45 = 18001 99349 10358
 41597 62305 10245 40095 52002 70202 86110 22200 10282 20000 88000
 18014 = + RBIZ K

RBIZ 42928 KAWAIN 7305 2781 K
 RMYZ 42928 KAWAIN 7305 2781 K
 RBIZ 11685 BITENG 4233 8334 K
 RMYZ 11685 BITENG 4233 8334 K

RCV DE RBIZ 401 17 18 2200 401 = FOR RJE73 RJH45 = 18181 99349 10358
 41598 42306 10263 40088 52001 70300 84110 22200 10282 20000 88000
 18014 = + RBIZ K

RCV DE RMYZ 451 18 18 2200 451 = SML FOR RJE73 RJH45 = 18181 99406
 10274 41997 00211 10250 40180 52015 70100 80000 22212 00240 299//
 399// 18014 = + RMYZ K

12464.2 kHz, 23-07, 0545-0606 UTC:

PEREKOP: RCV DE RFH61 376 18 23 0950 376 = SML FOR RJE73 RJD38 RJH45 =
 23061 99349 10227 41997 10404 10260 40090 54000 70200 81500 22222
 00260 20000 23013 = + RFH61 K

R.. DE RMC99 421 15 23 1000 421 = SML FOR RJH45 RJD38 RJE73 = 23061
 99367 10133 41/97 40000 10280 40110 54010 70200 8/// 22263 00230
 23012 = + RMC99 K

12464 kHz, 29-07, 0503-1507 UTC:

RIW DE RHL80 QSA3
 RHL80 R
 RHL80 QYT4 QSA1
 RIW DE RHL80 QYT4 QSX16942/118?6
 RHL80 OK AS2
 VVV RIW DE RMC99 QSA?
 RIW DE RMC99 QSA NO NO
 RIW DE RMC99 QSA NO NO QSL 287
 RIW DE RMC99 QSA2 QSA? QTC

RMC99 141 47 29 1440 141 = SML FOR RIT RMP RCV = 11111 19440 67552
 (faded)

VVV RIW DE RMC99 QSA? QTC

RMC99 768 29 29 1800 768 = SML FOR RIT RCV RMP = 11111 97965
 73694.....439043903 29024 = + RMC99(29fg message)

RMC99 319 21 29 1500 319 = SML FOR RIT = 11111 14109 04746 53832 27165
 37761 76450 33127 16762 40517
 79434 32988 73227 83753 54459 03830 75255 28961 29018

RMC99 141 47 29 1440 141 = SML FOR RMP RCV = 11111 19440....78557
 29042 (47fg message)

8345 kHz, 06-07, 0001-0128 UTC:

VVV RCV DE RMYZ QSA? QTC
Vvv Rcv de RKB91 QSA? QTC

RKB91 496 16 6 0401 496 = SML FOR RJH45 RJE73 =
06001 99360 10221 22222 (36.0N 22.1E Heading E @ 6-10kts)

VVV RCV DE RMYZ QSA? QTC

RMYZ 564 18 6 0400 564 = SML FOR RJE73 RJH45 =
06001 99362 10206 22252 (36.2N 20.6E Heading SW @ 6-10kts)

VVV RCV DE RCJG QSA? QTC

RCJG 328 18 6 0400 328 = SML FOR RJH45 RJE73 =
06001 99360 10228 22200 (36.0N 22.8E)

VVV RCV DE RBIZ QSA? QTC

VVV RCV DE RMYZ QSA? QTC
RMYZ 437 29 6 0413 437 = FOR RJT22 =
41149 85489 32571 87483 65910 36265 99119 46456 11455 33740
81876 06349 33364 92571 02209 41828 84439 96569 27813 08682
04722 38426 53728 98834 74989 15432 28029 06027 = + RMYZ

VVV RCV DE RCJG QSA? QTC

RCJG 462 28 6 0500 462 = SML FOR RJT22 =
90349 16931 82303 78944 17410 38494 10240 63319 53747 47170
51350 76067 41820 04195 61355 36300 63341 63626 91966 10775
36185 94379 35330 10316 19788 06025 = + RCJG

VVV RCV DE RCJG QSA? QTC

RCJG 142 72 6 0520 142 = SML FOR RJT22 =
19744 05454 35005 06061 = + RCJG (72 5fg message)

8345 kHz, 09-07, 1801-1837 UTC:

VVV RCV DE RCJG QSA? QTC
RCJG 403 18 9 2200 403 = SML FOR RJH45 RJE73 =
09371 99370 10025 22263 (37.0N 02.5E heading W @ 11-15kts)

RCV DE RMYZ QSA? QTC
RMYZ 718 18 9 2205 718 = SML FOR RJE73 RJH45 =
09181 99364 10142 22232 (36.4N 14.2E heading SE @ 6-10kts)

RCV DE RJT22 QSA2 QRV
RMYZ QSA2 QRV
RCV DE RCJG QSA2 QRV
RMYZ QSL 769
RCJG QSL 769
RJT22 QSL 769

(various 5fg messages from RCJG to RCV, and from RJT22 to RIW)

12464 kHz, 18-07, 0610-1800 UTC:

RCV DE RMYZ 357 18 18 1000 357 = SML FOR RJE73 RJH45 = 18061 99398
10257 41998 00211 10240 40160 52010 70200 80000 22212 00240 299//
399// 18014 = + RMYZ K

RCV DE RIR96 159 15 18 1545 159 = FOR RJE73 RJH45 = 18121 99349 10351
41698 22306 10300 .0159 52100 70100 80000 22232 00250 18012 = + RIR96

RCV DE RIR96 799 15 18 1905 799 = FOR RJE73 RJH45 = 18151 99349 10356
41598 22306 10300 40159 52100 70100 80000 22232 00256 18012 = + RIR96
K

RIW DE RFH61 926 18 18 2030 926 = SML FOR RJE73 RJD38 RJH45 = 18151
99371 10026 41598 40905 10260 40160542000 70211 84100 22222 00190
20200 18013 = + RFH61 K

RCV DE RMYZ 346 3 18 2111 346 = 1005182050 18002 = + RMYZ K
RIW DE RMC99 QSA2 QRV K - QSL 996 K
RCV DE RGV82 QYT4 QSA? K QYT4 QMO K

8345 kHz, 11-07, 0005-0858 UTC:

(RCV DE) RCJG OK QTC

RCJG 645 18 11 0400 645 = SML FOR RJH45 RJE73 =
11001 99355 70037 22200 (35.5N 03.7W)

VVV RCV DE RKB91 QSA? QTC
RKB91 537 16 11 0401 537 = SML FOR RJH45 RJE73 =
11001 99360 10128 22200 (36.0N 12.8E)

VVV RCV DE RMYZ QSA? QTC
RMYZ 274 18 11 0400 274 = SML FOR RJE73 RJH45 =
11001 99363 10192 22222 (36.3N 19.2E heading E @ 6-10kts)

RBIZ 8?0 18 11 0400 8?0 = FOR RJE73 RJH45 =
11001 99349 10358 22200

VVV RCV DE RKB91 QSA? QTC
RKB91 334 31 11 0501 334 = SML FOR RMP =
11111 98528 32877 11028 = + RKB91
(RIW DE) RJT22 OK QYT4 QLS
RIW DE RJT22 QYT4 QSX 17024
RMP DE RFH61 QSA? QTC
RFH61 11091 99550 10061 22242 (55.0N 06.1E heading S @ 6-10kts)

8345 kHz, 12-07, 0002-0704 UTC:

VVV RCV DE RMYZ QSA? QTC
RMYZ 575 18 12 0400 575 = SML FOR RJE73 RJH45 =
12001 99363 10231 22212

VV RCV DE RKB91 QSA? QTC
RKB91 575 18 12 0400 575 = SML FOR RJH45 RJE73 =
12001 99360 10228 22200

VVV RCV DE RBIZ QSA? QTC
RBIZ 414 17 120 0400 414 = FOR RJE73 RJH45 = 12001 99349 10358 22200
VVV RCV DE RIR96 QSA?
VVV RCV DE RKB91 QSA? QTC (stepping on RIR96 still trying to call RCV)
RKB91 136 31 12 0500 136 = SML FOR RMP = 11111 13977 38450 12028 =
+ RKB91 (31fg message)

VVV RCV DE RMYZ QSA? QTC
RMYZ 919 53 12 0601 919 = 40846 11505 34375 12052 = + RMYZ (53fg
message)

RCV DE RIR96 QYT4 QSX 8014
VVV RCV DE RJT22 QSA?
RMP DE RFH61
VVV RMP DE RFH61 QSA?
RMP DE RFH61 QYT4 QSX 9812 OK? RFH61 OK AS2

8345 kHz, 14-07, 0026-0658 UTC:

RCV DE RBIZ QSA?
RCV DE RIR96 QSA?
VVV RCV DE RMYZ QSA? QTC
VVV RCV DE RMYZ QSA? QTC

VVV RCV DE RKB91 QSA? QTC
RKB91 524 31 14 0500 524 =
11111 71927 58616 14028 = + RKB91(31fg message)

VVV RIT DE RFH61 QSA?
VVV RMP DE RFH61 QSA? QTC
VVV RIT DE RFH61 QSA? QTC

VVV RMP DE RFH61 QSA? QTC
RFH61 229 18 14 0945 229 = SML FOR RJH74 RJD38 RJH45 =
14061 99465 70076 22253 (46.5N 07.6W heading SW @ 11-15kts)

8345 kHz, 16-07, 0001-2103 UTC:

RIW DE RJT22 QRR ZSV?

VVV RCV DE RMYZ QSA QTC?

RMYZ 931 18 16 0400 931 = SML FOR RJE73 RJH45 = 16001 99398 10256
22200

VVV RCV DE RMYZ QSA? QTC

RMYZ 328 52 16 0501 328 = 79264 07948 90942 16051 = + RMYZ (52fg
message)

VVV RCV DE RKB91 QSA? QTC

RKB91 392 35 16 0500 392 = SML FOR RMP = 11111 92290 35974 16??? =
+ RKB91 (35fg message)

RMP DE RFH61 QYT9 QSA?

VVV RCV DE RMYZ QSA? QTC

RMYZ 803 18 16 0700 803 = SML FOR RJE73 RJH45 = 16032 99398 10256
22200

VVV RMP DE RFH61 QSA? QTC

RFH61 929 18 16 0930 929 = SML FOR RJH74 RJD38 RJH45 =
16061 99378 70091 22243

VVV RCV DE RMYZ QSA? QTC

RMYZ 358 18 16 2200 358 = SML FOR RJE73 RJH45 =
16181 99398 10256 22200

VVV RCV DE RBIZ

RBIZ 796 17 16 2200 796 = FOR RJE73 RJH45 = 16181 99349 10358 22200

RIW DE RGR35 QYT4 QSA?

RGR35 OK AS1

VVV RCV DE RMYZ QSA? QTC

RMYZ 233 3 16 2250 233 = 28261 62225 16002 = + RMYZ

VVV RIW DE RJT22 QSA?

RIW DE RJT22 QRU?

RIW DE RJT22 OK QYT4 WRK K

VVV RCV DE RMYZ QSA? QTC

RMYZ 629 18 17 0100 629 = SML FOR RJE73 RJH45 =
16211 99398 10256 22200**8345 kHz, 23-07, 0006-0507 UTC:**

VVV RIW DE RMC99 QSA? QTC

VVV RCV DE RMC99 641 16 23 0400 641 = SML FOR RJH45 RJE73 = 23001
99362 10142 22263

VVV RCV DE RLA88 QSA?

RLA88 NN 458 R110

RLA88 QSL 458

VVV RCV DE RGV82 QSA?

RCV DE RGV82 QYT4 QSA?

RIW DE RJT22 QYT4 QSA4

VVV RCV DE RIR96 QSA?

RCV DE RIR96 QYT4 QLS

VVV RCV DE RMC99 QSA? QTC

RMC99 382 31 23 0600 382 = SML = 11111 58294 35648 23029 = + RMC99

VVV RCV DE RGZ59 QSA?

RCV DE RGZ59 QYT4 QSX 9192

8345 kHz, 15-07, 0007-2348 UTC:RKB91 61? 18 15 0400 61? = ??? ??? RJH45 =
15001 99398 10256 222?? (39.8N 25.6E)VVV RMP DE RFH61 QSA? QTC
RFH61 123 18 15 0345 123 = SML FOR RJH74 RJD38 RJH45 =
15001 99434 70099 22252 (43.4N 09.9W heading SW @ 6-10kts)VVV RCV DE RMYZ QSA? QTC
RIW DE RGV82
RMP DE RFH61 QTY9 QSX 10308 FOR RIT
RFH61 OK AS2
RIT DE RFH61 QSA?
RKB91 sends 5fg message 43214 20202 15032 = + RKB91
VVV RMP DE RFH61 QSA? QTC
VVV RCV DE RIR96 QSA? QTCVVV RMP DE RFH61 QSA? QTC
RFH61 (stepping on RIR96) = SML FOR RJH74 RJD38 RJH45 =
16001 99389 70101 22243 (38.9N 10.1W heading S @ 6-10kts)RCV DE RMYZ 319 18 15 1002 319 = SML FOR RJE73 RJH45 = 15061 99398
10256 41998 00207 10240 40140 54000 70200 80000 22200 00240 299//
399// 15014 = + RMYZ KRCV DE RBIZ 294 17 15 1000 234 = FOR RJE73 RJH45 = 15061 99349 10358
41597 62301 10268 40073 53003 70302 86210 22200 10280 20000 88000
15014 = + RBIZ K

RCV DE RMYZ 128 3 15 2156 128 = 53301 52140 15002 = + RMYZ K

RCV DE RMYZ 878 18 15 2200 878 = SML FOR RJE73 RJH45 = 15181 99398
10256 41997 03418 10240 40140 54000 70200 80000 22200 00240 299//
399// 15014 = + RMYZ KRIT DE RJP99 219 19 15 2220 219 = FOR RMSZ RJH74 = 15181 99688 10371
42598 51007 10109 40060 52001 85500 22200 00110 20201 301// 40302
88000 80000 15016.. = + RJP99 KRCV DE RBIZ 343 17 15 2200 343 = FOR RJE73 RJH45 = 15181 99349 10358
41598 42303 10268 40075 51000 70300 84210 22200 10280 20000 88000
15014 = + RBIZ KRMP DE RFH61 288 18 15 0910 288 = SML FOR RJH74 RJD38 RJH45 = 15061
99426 70101 41592 80705 10170 40170 57020 70202 88500 22242 00160
20201 15013 = + RFH61 KRIR96 955 14 16 0338 955 =FOR RJE73 RJH45 =
16001 99353 10187 22232 (35.3N 18.7E heading SE @ 6-10kts)**8345 kHz, 31-07, 0006-0952 UTC:**

VVV RCV DE RBIZ QSA? QTC

VVV RIW DE RMC99 QSA? QTC
RIW DE RGV82 QYT4 QSX 6452/1?974 (QYTs for most of the night)

VVV RIW DE RMC99 QSA? QTC

RMC99 762 16 31 0401 762 =SML FOR RJH45 RJH74 =
31001 99348 70199 22200

VVV RIW DE RMC99 QSA? QTC

RMC99 533 34 31 0600 533 = SML FOR RIT RCV RMP =
11111 35789 34025 71062 94707 04670 64323 78738 96817 60266
12932 30539 52175 01751 71186 67967 83566 35941 96303 06491
15396 03390 83413 56131 61322 11215 26412 35401 02509 31029
= + RMC99

VVV RIW DE RHL80 QSA?

RIW DE RHL80 QYT4 QSX 9523

VVV RIW DE RMC99 QSA?

RIW DE RMC99 NR 543 RPT 2

RIW DE RMC99 NR 543 RPT 3

RIW DE RMC99 FOR RMP NR 543 QQX

14556 kHz, 31-07, 0801-0952 UTC:

VVV RHL80 DE RIW QSA?
RMC99 DE RIW QSA2 QRV
RIW COL COR 23 14070 K
VVV RHL80 DE RIW QSA?
VVV RGR35 DE RIW QSA?
VVV RJT22 DE RIW QSA?
RLD69 DE RIW

8345 kHz, 31-07, 0805 UTC:

(RIW DE) RMC99 113 80 31 1200 113 = SML FOR RIT RMP RCV =
11111 15038 54462 31075 = + RMC99 (80fg message)



M32b
Russian Naval Aviation
Aviatsiya Voenno-morskogo Flota Rossii

8816 kHz, 15-07, 0719-1734 UTC:

RJF94 RJC38 DE 10494 QTH 6456 3429 QTR 0717 QBG 7000 K - QTH 6032
3727 QTR 0818 QBG 7000 K - QAY UUEE 0917 QBF 3900 QBD 1350 K - QQM
XUMO 0938 SK

RJF94 RCB DE 63182 QTO 0820 QRD XLLP XMKK QRE 1110 QAH 5800 QBD
4000 K - QTH 5914 2157 QTR 0945 QAL XLLP 1058 QAH 5800 QBD 3000 K -
QQM XLLP 1105 SK

RJF94 RJC38 DE 75108 QQL ULAA 1712 QBD 13000 QBG 7300 K

8816 kHz, 18-07, 0726-1120 UTC:

JF94 RJC38 DE 75105 QTO 0622 QRD XLAA XLDR QRE 0822 QBD 17500 K - QTH
6725 4740 QTR 0722 QBG 8600 QRE XLAA 0820 K QQM XLAA 0817 SK

RJF94 RJC38 DE 75105 QTO 1108 QRD XLMV XLAA QRE 1228 QBD 15500 K

RJF94 RJC38 DE QTO 1115 QRD XLMV XLAA QBD 5000 QRE 1305 K - 10494
QQL ULWC 1254 QBG 7300 K

8816 kHz, 12-07, 1000-1343 UTC:

RJF94 RJC38 DE 10494 QTO 1333 QRD UMKK XUMO QRE 1700 QBD 1000 (?) K
- QTH 5831 3445 QTR 1433 QBG 5300 K - QTH 5947 2446 QTR 1535 QBG 7300
K - QTH 5608 2004 QTR 1632 QBG 7300 QBD 7400 K - QQM UMKK 1656 SK

RJF94 RJC38 DE 10494 QQM XUMO 0955 SK



M32c
Russian Air Force
Voyenno-vozdushnye sily Rossii

Thanks to Gwapse and Tony for the REA4 transcripts.

4835 kHz, 12-07, 1039-1440 UTC:

REA4 REA4 = 12100 99900 11140 20069 50000 10244 20134 70102 15530 93911 = REA4 RPT AL QLN K
REA4 REA4 = 121 *CANCEL* REA4 REA4 = 12110 99900 11140 22212 53560 63010 10124 20061 70222 87520 92111 = REA4 K
REA4 REA4 = 12120 99900 11140 22212 53560 63010 10124 20061 70222 87520 92111 = REA4 K
REA4 REA4 = 12130 99900 11140 22212 53560 63010 10124 20061 70222 87520 92111 = REA4 K
REA4 REA4 = 12140 99900 11150 27627 64660 63206 10240 20169 70202 83530 93311 = REA4 K

13479 kHz, 16-07, 0646-0652 UTC:

XXX XXX REA4 REA4 10993 = TNONIMIKA 2063 7174
XXX XXX REA4 REA4 84416 = WOÄVER 2054 5377 TORIMETRIÄ 4957 9319

7959 kHz, 16-07, 1740-2240 UTC:

?1905 10150 20043 70322 86730 = REA4
REA4 = 16 190 99900 27627 45860 61107 10254 20180 70222 88070 = REA4
REA4 = 16 200 99900 20069 79500 70000 10197 20160 70102 84720 = REA4
REA4 = 16 210 99900 20069 79500 70000 10197 20160 70102 84720 = REA4
REA4 = 16 220 99900 20069 79500 70000 10197 20160 70102 84720 = REA4

13479 kHz, 17-07, 1038-1740 UTC:

REA4 = 17 100 99900 73842 96394 81707 10206 20200 76465 88600 = REA4
REA4 = 17 110 99900 62596 75897 52605 10162 20111 82021 = REA4
REA4 = 17 120 99900 62596 75897 52605 10162 20111 82021 = REA4
REA4 = 17 130 99900 62596 75897 52605 10162 20111 82021 = REA4
(1427z transmitter off, back on at 1634z)
REA4 = 17 160 99900 62596 78997 52704 10150 20111 82021 = REA4
REA4 = 17 170 99900 63650 71207 10239 20164 70222 80960 = REA4

7959 kHz, 17-07, 1939-2240 UTC:

REA4 = 17 180 99900 63650 71207 10239 20164 70222 80960 = REA4
REA4 = 17 190 99900 73560 72803 10204 20163 70203 86120 = REA4
REA4 = 17 200 99900 73560 72803 10204 20163 70203 86120 = REA4
REA4 = 17 210 99900 60905 65460 10163 20097 70122 85770 = REA4
REA4 = 17 220 99900 60905 65460 10163 20097 70122 85770 = REA4
REA4 = 17 230 99900 63650 80807 10230 20157 70222 80050 = REA4

4835 kHz, 22-07, 0825-1540 UTC:

REA4 REA4 = 22090 99900 21130 73842 52202 10200 20176 80034 = REA4 K
REA4 REA4 = 22100 99900 21130 73842 52202 10200 20176 80034 = REA4 K
REA4 REA4 = 22110 99900 21130 73842 52202 10200 20176 80034 = REA4 K
REA4 caught the close of a flash message, no recording or transcription.
REA4 REA4 = 22120 99900 21120 62596 51697 43602 10251 20142 82134 = REA4 K
REA4 REA4 = 22130 99900 21120 62596 51697 43602 10251 20142 82134 = REA4 K
REA4 REA4 = 22140 99900 21130 62596 65997 40103 10242 20170 80034 = REA4 K
REA4 REA4 = 22150 99900 21130 62596 65997 40103 10242 20170 80034 = REA4 K
i.p. 19242 SORORAT 7957 9663 K
REA4 REA4 = 23090 99900 73842 89697 81602 20224 20206 88500 = REA4 K
REA4 REA4 = 23120 99900 62596 55897 63203 10210 20117 83011 = REA4 K
REA4 = 23130 99900 62596 55897 63203 10210 20117 83011 = REA4 K
REA4 REA4 = 23140 99900 27627 31860 23109 10270 20085 70222 52100 = REA4 K
REA4 REA4 = 23150 99900 27627 31860 23102 10270 20085 70222 82100 = REA4 K

4835 kHz, 24-07, 0840-1540 UTC:

REA4 REA4 = 300 CANCEL REA4 REA4 = 24080 99900 23150 73842 92597 83001 10186 20173 88500 = REA4 K
REA4 REA4 = 24100 99900 23150 73842 92597 83001 10186 20173 88500 = REA4 K
REA4 4835cw caught the last couple of numbers and 'K' of an XXX flash message
XXX XXX 6OKS 6OKS 02445 WOLIK 4668 8697 K
REA4 REA4 = 24130 99900 23140 27627 63997 81702 10232 20158 86021 = REA4 K
REA4 REA4 = 24150 99900 23140 27627 70997 82207 10200 20143 86021 = REA4 K

4825 kHz, 25-07, 1040-1540 UTC:

REA4 REA4 25100 99900 20069 68560 73101 10188 20127 70311 85210 92088 = REA4 K
REA4 REA4 = 25110 99900 22212 43960 20403 10184 20058 70200 82030 = REA4 K
REA4 REA4 = 25120 99900 22212 43960 20403 10184 20058 70200 82030 = REA4 K
REA4 REA4 = 25140 99900 72842 87997 40503 10195 20174 82012 = REA4 K
REA4 REA4 = 25150 99900 72842 87997 40503 10195 20174 82012 = REA4 K

13479 kHz, 27-07, 0740-1125 UTC:

REA4 = 28 070 99900 (faded)
REA4 = 28 080 99900 (faded)
REA4 = 28 090 99900 27170 73842 90597 81602 10216 20187 80200 = REA4
REA4 = 28 100 99900 27170 62596 70597 53002 10206 20151 83130 = REA4

4835 kHz, 29-07, 1540 UTC:

REA4 = 29150 99900 28140 62596 58897 40104 10216 10130 82021 = REA4 K

7959 kHz, 29-07, 2240-2340 UTC:

REA4 = 29 220 99900 28140 20069 70685 06390 31018 82013 17022 28511 0 = REA4
.i.p. 28150 20069 77669 73402 10170 20130 70302 83210 = REA4

4835 kHz, 30-07, 0848-1440 UTC:

REA4 REA4 = 30080 99900 20069 65560 63304 10203 20135 70302 86420 = REA4 K (transmission was 8 minutes late)
 REA4 REA4 = 30090 99900 20069 65560 63304 10203 20135 70302 86420 = REA4 K
 REA4 REA4 = 30100 99900 20069 65560 63304 10203 20135 70302 86420 = REA4 K
 REA4 REA4 = 30130 99900 22212 37660 41805 10250 20093 70200 83250 = REA4 K
 REA4 REA4 = 30140 99900 73842 90354 81606 10202 20186 71010 88500 = REA4 K

7959 kHz, 30-07, 0040-0051

REA4 = 30 240 99900 28150 20069 77660 73403 10170 20130 70302 83210 = REA4
 XXX XXX JUE4 (faded)
 XXX XXX JUE4 MJSR 443 75 ARENAK 1452 2832
 XXX XXX JUE4 MJSR 711 65 ??ÄHTENXE 2934 7252

4835 kHz, 31-07, 0840-1340 UTC:

REA4 REA4 = 31080 99900 30140 20069 66560 60302 10218 20151 70102 83111 92777 = REA4 K
 REA4 5fig letters
 REA4 REA4 = 31090 99900 30140 20069 66560 60302 10218 20151 70102 83111 92777 = REA4 K
 REA4 REA4 = 31100 99900 30140 22212 71903 10200 20157 70222 86520 92077 = REA4 K
 REA4 REA4 = 31130 99900 27627 92660 83001 10171 20141 79217 86937 93377 = REA4 K

More logs in the Logs Section.

"Bear net" on 8895 kHz, 25-07, 1800-2100 UTC:

"W" markers at 1800, 1820, 1900, 1920, 1940, 2040, 2100 UTC.
 Z7NG DE TV6P QSA 3 K. (TV6P) OK K
 Z7NG DE TV6P QSA 1 QSV K
 Z7NG DE TV6P VVV VVV
 TV6P QRV K
 TV6P R 547 ??? ??? 069 K
 Z7NG DE TV6P QRV K
 (TV6P) RPT K @
 Z7NG DE TV6P R = 474 286 812 550 K
 SHNE DE TV6P. TV6P QRV. TV6P R = 883 671 284 610 613
 FEQ6 DE TV6P. TV6P QRV. TV6P R = 989 549 500 210. TV6P R = 989 549 500 910

Russian Air Force "Bear net" on 8895 kHz:

26-07: "W" markers at 0240, 0300, 0340, 0400, 0420 UTC
 30-07: "W"-markers at 0600, 0620, 0640, 0800 UTC
 30-07: "W"-marker followed by a short voice call. Location over the Mediterranean Sea, between Sardinia and Alger.



M89

Chinese military

Stations and strings:

V 7NPE 7NPE 7NPE DE QV5B QV5B	VVV Q2M Q2M Q2M DE NYZ NYZ
V 8CPZ 8CPZ 8CPZ DE XW6W XW6W	V YUQW YUQW YUQW DE ASDF ASDF
V DKG6 DKG6 DKG6 DE 3A7D 3A7D	V AUTV AUTV AUTV DE 5CFG 5CFG
V H2FL H2FL H2FL DE DRV8 DRV8	8LQV DE DOM1
V HIE3 HIE3 HIE3 DE 6JDU 6JDU	A70
V MW3D MW3D MW3D DE 2SLC 2SLC	C5GH
V RXP7 RXP7 RXP7 DE CZT2 CZT2	6TUT
V WITN WITN WITN DE GNXG GNXG	

Messages:

7767 kHz, 06-07, 1630 UTC:

i.p. 4T34 5UN6 76. D7A. (Cont'd)
III III =
D6N6 .D5T TANN. T34. 3.U. (Cont'd)
III III =
.TU4 U..5 5.A4 UN3T U... (Cont'd)

5555 kHz, 10-07, 1650 UTC:

EEE N6T3 7G/T2/CCK 2EEEE -Handsent-
EEE EE 37
EEE == 37 QR EEEE
EE C45C.EEEE
EEE VV == 35 == 5C36N54 AR AR EEE
EEE 345.. 3 == 5.T37 QRT 2/CCK CK 129 3. 3N EEEEEE
EEE 3 7G/T2 =
5 EEEE AR
EEE == LCH . 3 == 5C436N4 EEE
(Letters all run together - Silent - 1659z)

6666 kHz, 11-07, 0127 UTC:

7A56 45UA 35N4 NUTD 7UT5 TU3U
N6T3 7AU4 46DT 4TU6 6U37 4A73 346N 73A5 A6N.?
N63 U6D3 NUT7 63D4 47D5 U4D6 UA45 746T 4AU6
D6T7 4UD7 7T.3 D 34D6 A6.A? A65T TUN5 TU5.? TU53
7U5A 34NA TA3N AGA (Silent - 0129z)

6666 kHz, 11-07, 1500 UTC:

NTDU N6U7 A7NA DNU4 4536 6N64 745A III ==
5A4U 65DA 3TUA 5A7D 74N5 N6DU 3TN6 DN53 TANA TTAA
UN43 7UT5 NDN4 D4UA AT74 U5DT 347U A4D3 745TN A365
D6NA 6N4A DN3A 6TUS T4N7 U756 6536 6D43 67UT TA65
T3NU 765D 6NDS U67D 3D74 7TU4 A4U7 UA45 UTAS TA67
43DN U576 4TUN 34NA 35TA 576N 64T3 7U4T T6UD UN3A
U5N6 7NU5 7NU3 457U 4N36 537T D6N3 4T7U 635D 3T7U
A5U6 TNU7 3NUD U5T4 543D 45TN AU34 7DUT 43D6 3TN6
N375 AN6D N764 35UD A57T 63U5 7U35 475U T3U4 AT76
T66A UN7A T473 TD75 6T74 76T3 UD67 U365 3UAD AUN4
T635 37DT 6N47 5A67 6D5U AN6T 3UA4 34A6 UD34 3UDA
III III ==
A44U 7AA7 6T53 NA4D 6A36 N565 53T4 DAAN TANA TTAU
34T3 366N 35UA A6DU AD74 6N56 5DN5 DN4T 355D 76DU
4T4U U4DU T55U 6N67 A47D UA65 7657 U5U7 U543 6DND
4DD3 4335 5T36 U67T 6AT7 4646 DN73 3U7N N75T T5N4
36TN 4DU6 T74N DAND AN37 566T DU3A 7UDU UNUT U75D
6TUS TD74 T734 AN67 NAT5 ANDA UDTA 7TT5 NA4T TDA4
63NA A34U 7454 T5DT U47U T4NT DA67 5U43 7UAN N3NA
73A5 566N 7ND4 513T N5U7 UTNT UDND 3AT4 U5D3 A377
D3NT 7TN7 7336 345A 4AUD U5AU U6TA B354 65DT 6DD5
UT67 53T4 N364 37AT 6A6N .443 N7U6 TN34 3D7A AR AR K K K
R R K
R R SK (Silent - 1454z)

5555 kHz, 16-07, 2235 UTC:

QSL ..34 K
SR 7G GA K
HR 7G GA
7G../CCK CK 30 12 07 17 060 PN
7G/66/CCK CK 30 12 0GE 77 0605 RMK AGN
7G/66/CCK CK 30 12 07 17 0605 RMKS 5.509039 =
NTDA A4U4 T66N U6N3 NA5D T4UD DTNA TAA6T .. (Cont'd)
AR (Silent - 2240z)

11154 kHz, 14-07, 1805 UTC: In progress, handsent, horrible CW
//A is station A, //B is station B

554AD UN5 56TT U34T 5.E
= 53WU 7A7D 54TT NR R3.?
54TT N.44 55.T D.N. (Cont'd)
== 5635 4.4U 57U 65UA 7 (Cont'd)
== 6445 4T.. (Cont')
== N3U5 NTN7 4UT AR//A
GTTR.T //B (Both stations on this frequency)
= FPT //B RPT //A RPT //B RPT //A
VV = 5634 A3D6 //A
RPT//B
.7UD DE A7O //A
QSL ? K //A
= 5334 DU4 55UN 3U.. 5.U4 7..T 5NAT AVTA //A
== 7545 6340 400//A
85050505 .333U75 .. 55U7 N...//A (Cont'd)
== 55A ==
55.6 .4 =
5QA = 57.. A7AI =
5.U5 7A53 =
5NAA A4UD AR AR //A
RPT RPT.. //B
U57A ... //A
C5GH DE .. SD..//B
...AA.. D AR //A
CHG ??//B
= 5DA == .DU = 5GU5 7US.. //A
== N3U6 T.5A 4A4. =
53TT 53U6 455U 7T35 45.6 5733 A.D3 =
5D.. 4... //A (Cont'd)
QSL ??//A
= 5735 3UAA //A
== 5735 5U5. =
IDUNA A.5 =
5NA3 NU6A =
6T43 6T ==
6T33 63.6 ==
6A3A 537T
= RPT T6O
= 5A3N 36AP AR //A
.. ? QSL ? //A
VV KK VV VV VV VV VV VV VV K..//A
VVVVV OK...
QSL //B
R R NIL //A
== 6A3A A357 //B (Silent 1833z)

3330 kHz, 26-07, 1847 UTC:

... VEEE 6 Q.3 RMKS 6041 TO 4634/45.1.. C.. AR
== 41981/4634/04.0/117NR/6041 AR
= 41981/4?/4634/0400/117NR/6041 AR AR (Return to roundslip - 1850z)

8789 kHz, 30-07, 0028 UTC:

V WITN WITN WITN DE GNXG GNXG
VVV UGT COMM = 536/2105/ZM EEE
VVV UGT COMM = 7536/2105/Z25/4314 AT
V WITN WITN WITN DE GNXG GNXG

5588 kHz, 23-07, 1103 UTC:

76TA 73AT D7T7 NNU6 3474 A3AT 5T73 T6.3 NTT5
53A6 DAA5 N53D 64N6 5N.A 6D46 D6N4 .U7U 7NA4
6UD4 AN43 DUTU D6A4 736A UAD3 III =
ADNT 743U 545A 7A7T 6375 6UAT T5U7 U5A4
TT74 TTT7 U3DT TN5N 6AN3 3.63 637N 3T34 536A
U65N 6NNA 4745 474D A3N7 UNAU UNU6 NU4D
3TND 6ND6 TU7D NAA6 4NT7 65DA 5735 ATA5
.U4 4D7T 5U63 N.36 NDA5 64DT A3AD 535U UDUN
AU74 ND7U 353T 4765 6T.4 D43D U4TD 34TD 73T7
4T6U TA7A 6ADN A647 5475 3TU3 U6DN 6375 34U7
T76. T576 .D3D UU4D 5D4D 4NN3 TD56 7T73 67TU
NDA3 A754 4D64 TATU 6DAN 5A56 7DD3 67UT 575N
6T4D 4N5T .543 53A6 7A.N TD47 AN46 A55U 7U3U
4T45 U5T3 U6TA 6NAT AT3U 53DT ADA7 NANU U53ND
7NUN DNUD III =
57AN ANDT6 5D7 3UT4 UU4A N46T 76DA ND7U TT74
TTAT 5N.. D7T3 7A3T N4U7 45D3 3573 3N65 45D4 TAU4
4T6. 64U7 AT4U UN5N 35AT NU34 N465 DT47 357A
A575 U6D4 34UD 3465 A766 DTDT A7DD 6DNA A3TU
T6DU 4U34 7537 3DND 76NU 4AA6 6D35 NU3U .5N5
NANU 347D UADU AU.3 U4D3 AT6D T764 AU46 T7A3
N4AU 35.D TU44 4D3N D5A3 6TUA 3D65 5ND. TA66
6N56 4UT5 U4.6 5T.N TN7A 6TA4 7AT7 ATU7 3UD3
5NND D3TD U4.. D7AN 7.66 43T4 A47T NU4D 4T65
AT57 57TD 7UTA D56. 46TD 6U33 73T6 3U36 AN73
N5N7 .56N 64TU DN63 NA4T 736U 6753 67TT UT6N
III = 6TUT AR
MSG NR 89 CK 301 34 0723 1900 =
U37T AUD7 AN34 N4AT AT.N 7A..4AD5 TAN7 TTT74 TTTN NTNU (Cont'd)
(Sending much faster now)
III = 6TUT AR (Silent - 1130z)

5555 kHz, 26-07, 1412 UTC, i.p.

35AT NU37 4N64 3D7D A7N6 N3TA 6DND (Cont'd)
III = NA37 D4TA D7N6 577A UNTU 6UD5 ND46 (Cont'd)
(Sends ? when an error is made)
? AR
R = A375 AR K
EEE = 3N6D AR K
= 6ANN AR K
QLS ? K
= TNND AR K. = N7TA AR K. = TA6A AR K = TTU3 AR K. R = 53D6 AR K.
= 53D6 AR K = 4DDU AR K. = EEE = 6N6T AR K = 6DND AR K. =
6DND AR K = NTNU AR K. = ANN3 AR K
QLS K
JN
= W757 AR K. = 4757 AR K = ANUA AR K. = A7A3 AR K
QLS K Q R
= A7AW ? A7A3 AR K. = = DTT6 AR K = DTT6 AR K. = NUD6 AR K. = =
NUD6 AR K
AS AS K
R HR 7G GA K
R MSG NR 44 CK 299 96 0726 222 EEEE
7G NR 44 CK 299 96 0726 EEEEEE
7G NR 44 CK 299 96 0726 2232 RMKS 3973 TO 0783 K K
K R = =
T3UA 7A36 45UA DA7U AN7T ND7U 4TDN 4N56 TA6A TTUT 7A56 T7D3
(Cont'd)
III = 7T64 UD3A N3N7 (Cont'd)
? EEE AR K
OK
R = T3UA AR K. = TA6A AR K = TTUT AR K. = DN4U AR K. R
= D37A 7UDA DT76 TA6A TTUA AR K
R = ..D6 AR K. = 3T5 AR K. = N6AU AR K = 55. ? 553N AR K. =
DNTN AR K
R = SUUN AR K. = 7ANT AR K. = 5TDU AR K = = 7356 AR K. =
5D5T AR K. = TN37 AR K = 5AN3 AR K. = NT76 AR K. =
TU74 AR K
R U7G 99 U EEE U MSG 99W GA K

6666 kHz, 16-07, 0017 UTC:

RR 1024 W = DU34 AR K
R R PT 9W = T..4 AR K.
R RPT 9W = TAD4 AR K
R RPT 10W = TTAU AR K
R R HR EEEE HR EGA K
R R EE NR EEEE
EE NR 04/EX 0820 RMKS 9019 TO 7719 K
R EE NR 04/EX 0820 RMKS 9019 TO 7719 K
R = = AE4SD/P7GN Q AR K
= = AE4SD/P7GNQ AR K
R = = AE4SD/P7GNQ AR K
= = AE4SD/P7GNQ AR K
QSL 0822 K QSL 0822 K QSL 0822 K
U E GA
RPT NR K NR K
OK OK QSL 0824 K
VA
VVV VVV VVV 8LQV DE DOM1 K VVV VVV VVV 8LQV DE DOM1 K
VVV VVV VVV VVV VVV VVV
R = = FT0ER/ASK2 EEE AR K
AGN AGN
R UGA
AGN
= FWWW2/C.VFJ K
OK QSL 0839 K
HR 7G K
R 7G NR 04 CK 115 78 08 1607 30 RMKS 9019 TO 7247 K
R = =
5A6A 65UD A63T 5A5U 7474 N6D3 3T65 DN4A TATA ? TANA (Cont'd)
TT3N DTDU U66A 7363 564A U3TN AR AR
R 1P 1P
R R 9W = = TANA AR K
R 10W TT3D AR K
R 17W = 34.. AR K
R R R 10W = TT3D AR K
R 11W = DD.. AR K
R 12W = AR K
R U7G GA K
GA
99W
58W GA = = = = = NDD7 EEEEE
58W GA = = ATDN NN K. 58W GA
VVV 58W GA = DT = ATDN NDD7 N74N U5D. (Cont'd)
(Signal fading badly)
AR
40W = .N3 R. 9W = D7DT D7DT
R 37W = 4T..
R 2.W = = NATA NATA
RI/951 K (Silent - 0147z)



M97

Vietnamese numbers

Frequency: 10375 kHz

Mode: Morse

10375 kHz, 17-07, 1454 UTC, Message sent 3 times.

SO DIEN:83 SO DIEN:83 SO DIEN:83
DK: HT HT HT
SO NHOM:40 SO NHOM:40 SO NHOM:40
AAAAAAAAAAAAAAA
55276 65960 55213 17964 55315
33456 64906 42458 99262 44120
97933 58751 99465 20971 95860
40647 52991 57422 87832 10261
75486 08849 78146 68022 73405
14555 25990 96287 17311 13452
84497 50466 03952 07308 32602
99301 59991 39631 54165 77825
KKKKKKKKKKKKKKKKKKKKKKKKKKKKKK

VARIOUS MODES



SK01 / HM01

Dirección General de Inteligencia

9155 kHz, 28-07, 0945 UTC: 07022 03631 37672 18653 62111 66161
9155 kHz, 29-07, 1741 UTC: 07022 03631 37672 18653 62111 66161
11530 kHz, 25-07, 1721 UTC: 07022 03631 37672 18653 62111 66161
11530 kHz, 29-07, 1741 UTC: 07022 03631 37672 18653 62111 66161
11635 kHz, 26-07, 1839 UTC: 07022 03631 37672 18653 62111 66161
11635 kHz, 29-07, 1758 UTC: 07022 03631 37672 18653 62111 66161
9240 kHz, 29-07, 0945 UTC: 07022 03631 37672 18653 62111 66161
16180 kHz, 25-07, 2148 UTC: 07022 03631 37672 18653 62111 66161
16180 kHz, 27-07, 2129 UTC: 07022 03631 37672 18653 62111 66161

Don Schimmel heard the above mentioned transmissions and had an interesting comment:

"All above were YL/SS announcements followed by RDFT transmissions. It would certainly appear that a message is repeated until a QSL is received by Cuban HQ from the particular field agent. Then a new valid message or dummy message is transmitted. Part of the 5F group is probably an addressee because there is no reason for a field agent to copy all traffic if it is not addressed to him. Noted that the 5th digit of the 5F group never has 0 or 9. Just digits 1-8. After 8 appears a few times, a change takes place."

M42 & X06

Russian Government & Intelligence



Modes:
**Various digital modes, CW,
Tones (Мазелка / Mazielka)**



14981 kHz, 01-07, 1145 UTC, Baudot 75/500

Russian diplo. Msg on "UZR" circuit. Link id 90138.

uzr uzr uzr 2/615 uzr uzr uzr 2/615 uzr uzr uzr 2/615

ur grz qdg 2 gsa 4

ur qrz qdg 2 qsa 4

11100 90138 34789 01013 03059

11100 90138 78917 01014 03109

M42

14878	01-07	0130	Russian Intel.	FSK 200/500
14981	01-07	1145	Russian diplo. Msg on "UZR" circuit. Link id 90138.	Baudot 75/500
14981	01-07	1151	Russian diplo. 5FGs on link ID 90138	Baudot 75/500
16150.5	01-07	1629	Russian diplo	CROWD-36
14483.5	01-07	1643	Russian diplo	CROWD-36
14543	03-07	0705	Russian diplo. Two 5FG messages on the RAU circuit, link id 60070	Baudot 75/500
12158	03-07	0725	Russian diplo. Two 5FG messages on the RAU circuit, link id 60070	Baudot 75/500
16320	04-07	0150	Russian Intel. Link id 13924	FSK 200/1000
9188	04-07	0712	Russian Intel.	FSK 200/1000
14405	04-07	0719	Russian diplo	CROWD-36
16166.5	04-07	0956	Russian diplo.	CROWD-36
11123	04-07	1900	Russian Intel. 6 17	FSK 200/500
9117	04-07	1910	Russian Intel. 6 17	FSK 200/500
6828	04-07	1920	Russian Intel. 6 17	FSK 200/500
11122	05-07	0420	Russian Intel.	FSK 200/1000
16337	07-07	1132	Russian Gov. RDK RDK QSY 11162 K. QSY 11162 K. BK QSA3 K. RPT K. OK AS K. SK. Nothing on 11162 kHz	CW
11424	07-07	1321	Russian Gov. K4MT DE NT9P K. QTC ZZC ZV. ... K. SLD.. Switched to printer sending RYs	CW
18651	07-07	1530	Russian Intel. Id 20501. 39312 00000 00000 04037 21447 34669 00893 16327	FSK 200/1000
16336	07-07	1540	Russian Intel. Link id 20501 Type 07145	FSK 200/1000
16336	07-07	1540	Russian Intel. Id 20501. 39312 00000 00000 04037 21447 34669 00893 16327	FSK 200/1000
14913	07-07	1550	Russian Intel. Id 20501. 39312 00000 00000 04037 21447 34669 00893 16327	FSK 200/1000
16320	08-07	0150	Russian Intel.	FSK 200/1000
16320	09-07	0150	Russian Intel.	FSK 200/1000
20871	09-07	1127	Russian Intel, Moscow	40bd 34 tone modem
17438	09-07	1355	Russian Intel.	FSK 200/1000
15849	09-07	1405	Russian Intel.	FSK 200/1000
15931	09-07	1700	Russian Intel. Message to Link 20501, Msg Nr 127. Total message size 4 blocks but only 3 decoded: 0. 1 and 2.	FSK 200/1000

12514	09-07	1740	Russian diplo	Baudot 50/500
12209	09-07	2100	Russian Intel. Link ID 45057. Msg #007. Msg Type 07145. 4 07836 00000 00000 02052 44730 FSK 200/1000 32918 00893 00233	
10805	09-07	2120	Russian Intel. Link ID 45057. Msg #007. Msg Type 07145. 4 07836 00000 00000 02052 44730 FSK 200/1000 32918 00893 00233	
8176	09-07	2140	Russian Intel. Link ID 45057. Msg #007. Msg Type 07145. 4 07836 00000 00000 02052 44730 FSK 200/1000 32918 00893 00233	
12051.5	10-07	0638	Russian diplo	CROWD-36
13374.5	10-07	0651	Russian diplo0	CROWD-36
16320	12-07	0150	Russian Intel.	FSK 200/1000
9067	12-07	1612	Russian Intel.	FSK 200/1000
9067	12-07	1613	Russian Intel.	FSK 200/1000
16336	14-07	1542	Russian Intel.	FSK/200/1000
15931	16-07	1700	Russian Intel. Link 20501. Msg 002. 00492 00000 00000 03300 36779 34796 00893 13131	FSK 200/1000
12209	16-07	2100	Russian Intel. Link 45057. Msg 002. 50608 00000 00000 03892 44730 33628 00893 63673	FSK 200/1000
10805	16-07	2120	Russian Intel. Link 45057. Msg 002. 50608 00000 00000 03892 44730 33628 00893 63673	FSK 200/1000
8176	16-07	2140	Russian Intel. Link 45057. Msg 002. 50608 00000 00000 03892 44730 33628 00893 63673	FSK 200/1000
16320	17-07	0150	Russian Intel. Link ID 31958. Msg 084. 32928 09956 37135 03095 27377 46809 26237 37827	FSK 200/1000
16329	20-07	1200	Russian Gov/Intel. Message repeated: 00000++++++162)5761	FSK 200/500
16329	20-07	1200	Russian Intel. 6 54	FSK 200/500
14641	20-07	1210	Russian Intel. 6 54	FSK 200/500
12187	20-07	1220	Russian Intel. 6 54	FSK 200/500
15750	21-07	0909	Russian diplo	CROWD-36 áá
18651	21-07	1530	Russian Intel. Link 20501: 38052 00000 00000 00219 12857 03209 00893 18669	FSK 200/1000
16320	22-07	0150	Russian Intel. Link ID 13366 . Msg 16384 00000 00000 01852 15371 03468 00000 14382	FSK 200/1000
15931	23-07	1700	8 messages, Nrs 126, 127, 255/23rd all different and mostly to different link numbers.	FSK 200/1000
12209	23-07	2000	Msgs to Link 61443-Nr 006 and Link 45057-Nr 002: Link ID 45057: 23rd of month: Msg Number 002: Msg Type 07145: 65388 00000 00000 03575 38644 35139 00893 54193.	FSK 200/1000
6828	25-07	1918	Russian Gov/Intel. ++++++162)571 00000 ++++++	FSK 200/500
16320	26-07	0150	Russian Intel. Link ID 13366. Msg 16384 00000 00000 01852 15363 03468 00000 14382	FSK 200/1000
14593	28-07	1112	Russian Intel. Msg Nr 057 Type 07145 on Link 36882: 29253 00310 57824 07297 43092 35534 22611 46551	FSK 200/1000
12206	28-07	1112	Russian Intel i.p. Msg Nr 189 Type 15337 on Link 55315: 62031 00319 ... 31827 63447	FSK 200/1000
16336	28-07	1549	Russian Intel. Link ID 20501	FSK 200/1000
14913	28-07	1551	Russian Intel. Link ID 20501	FSK 200/1000
14913	28-07	1556	Russian Intel just ending transmission	FSK 200/1000
14539	28-07	1910	Russian Intel. Msg Nr 120 Type 07145 on Link 45057: 48428 24403 09098 05767 59621 01438 49076 60376 and Nr 249 Type 08171 on Link 05405: 05405 65527 ... 65533 65529	FSK 200/1000
15931	30-07	1600	Russian Intel. Many different Links, Msg Nrs and Types. Link 20501 Nr 002 Type 07145 seemed to be dominant.	FSK 200/1000
9354	31-07	0650	Tent. Russian Gov. rpt pbl k - qtc 1zz c k then into rtty	CW
9354	31-07	0650	Tent. Russian Gov. 464646464646464646464646 837 110 31 0645 4321 = 83657 59722 16159 02247 51351 85251 9à..	Baudot 50/500

M42a

11485	06-07	1226	GRU HFDF net. —— RPT 3. VVVVVV RPT 3 K K ? OK	CW
10436	05-07	1134	GRU HFDF net. VVVVVV NW— NW—. 28955 — 29296 —. 29296 – 89905 K. — K	CW

X06

14377	01-07	0931	Mazielka. Sequence: 432516
12152	01-07	0936	Mazielka. Sequence: 432516
17470	11-07	1231	Mazielka
12200	31-07	0932	DOSC Moscow. Mazielka. Sequence: 241563



XP family

XPA, 10943 kHz, 09-07, 1730 UTC:

Block Sync 4444444444
Block Sync 922 922 922 1 922 922 922 1 922 922 922 1
Block Sync 4444444444
Block Sync 6
Message Start
07260 00225 22695 73575 91559 35527 67265 77074 45631 55195 67870 57925 78476 55372 47116
50481 24585 68395 88539 10201 86068 40677 42355 57149 70781 71048 31894 28333 64620 86946
54124 17452 70231 28123 94975 44953 16434 53596 11837 47856 81202 02313 96193 73497 10915
57995 85170 12068 18856 18093 85529 01805 28353 29247 78805 98596 94656 85639 12274 39466
04392 66702 36623 25221
Block Sync
99027 44357 65874 81072 72534 94843 58297 11397 76175 12316 77677 97966 30097 93427 18365
84242 86834 90723 60114 50797 73982 10396 65639 67839 34795 87547 01019 70845 87405 27686
33074 22062 67986 92418 36526 18699 18085 67624 38953 14389 72101 35897 11458 98459 22841
04382 72026 41907 46918 18121 94089 14796 98458 44037 22194 53023 84831 36884 22399 26931
08316 70456 41166 30433
Block Sync
40391 97416 48074 66426 75389 30993 93619 22862 47552 08031 60222 02367 00134 05323 08389
25655 32210 05460 17352 00150 99745 02804 31654 12768 45317 23845 70570 72140 87085 55765
86036 48907 55286 51897 54870 52807 72493 58853 11755 98351 42768 48424 51736 04389 34239
63012 03397 52536 39375 30205 46915 60818 94369 43674 58698 32493 21516 53650 24139 74369
15028 18403 90230 29824
Block Sync
71090 75889 82150 66352 80080 58078 27291 95722 84367 54239 56517 42073 95906 44229 86963
61538 02408 26984 15520 69106 43755 21059 71361 50446 40538 0078 1772 99466 55668 811763322335
79910 90066 24152 06668 4273

XPA2, 12217 kHz, 26-07, 2140 UTC:

02378 00089 94406 90448 64857 44946 83106 63517 61521 33125 87662 36604 87695 64564 09319
28973 82705 76124 16062 14923 50760 01883 61992 70157 01672 94214 14976 67693 96633 58165
73775 10342 18238 74364 42338 92834 02936 47119 86206 54432 23010 04074 94080 07645 37589
83415 24038 84529 99948 96753 77884 00582 87495 27811 40004 17946 78401 83285 07541224746
72356 66082 06175 79452 04900 80166 36939996702 72202 76639 28330 19514 04509 15009 43477
49438 55150 72345 00335 16679224999 3867 5966932004 2699 55378911866 03078 22220 7011
3380 52222



XSL a.k.a. Slot Machine
Japan Maritime Self-Defense Force
海上自衛隊 Kaijō Jieitai

Daily on 4153, 4231.5, 6250, 6417, 6445, 8313, 8588, 8703.5 kHz.

Mode: QPSK 1500bd

Reportedly telemetry transmitted by the Japanese navy



North Korean diplomatic stations

17318.5	25-6-2013	0510	N. Korean diplo	DPRK-ARQ 600/600
16006.5	25-6-2013	0659	N. Korean diplo	DPRK-ARQ 600/600
12320	1-07	1103	Unid North Korean embassy	DPRK-ARQ 600
14530	1-07	1104	Unid North Korean embassy	DPRK-ARQ 1200
14850	1-07	1141	Unid North Korean embassy. QSX freq 14530 kHz	DPRK-ARQ 1200
20410.5	2-07	0809	N. Korean diplo	DPRK-ARQ 600/600
18525	11-07	0817	MFA Pyongyang North Korea. All encrypted text.	DPRK-ARQ 600/600
16248	11-07	0903	MFA Pyongyang North Korea. 600/600. ARQ Mode. All encrypted text.	DPRK-ARQ 600/600
14743	11-07	0913	MFA Pyongyang North Korea. 600/600. ARQ Mode. All encrypted text.	DPRK-ARQ 600/600



UTILITY ROUND-UP



Beacons

Vincent copied this Unid on 9886 kHz, 09-07, 2036 UTC: Continuous 8 8 8 8 ...

Jack Metcalfe and Glenn Hauser reported an unid beacon on 11979 kHz. Could this be related to Vincent's unid? The transmissions started at 0520 end ended at 0535. Between 28 and 30 repetitions per minute.

11979 kHz, 08-07, 0523 UTC: beacon sending "7"
11979 kHz, 14-07, 0509 UTC: beacon sending "3"
11979 kHz, 16-07, 0523 UTC: beacon sending "7"
11979 kHz, 17-07, 0529 UTC: beacon sending "7"
11979 kHz, 18-07, 0515 UTC: beacon sending "7"
11979 kHz, 19-07, 0530 UTC: beacon sending "7"
11979 kHz, 20-07, 0520 UTC: beacon sending "555" Groups of 3
11979 kHz, 21-07, 0520 UTC: beacon sending "444" Groups of 3
11979 kHz, 22-07, 0522 UTC: beacon sending "444" Groups of 3
11979 kHz, 23-07, 0520 UTC: beacon sending "888" Groups of 3
11979 kHz, 23-07, 0520 UTC: beacon sending "888" Groups of 3

LOGS SECTION

Code	Freq.	date	day	UTC	remarks	mode	contributor
---	11979	8-7-2013	Mon	0523	Unid sending "7"	CW	(GHau)
---	9886	9-7-2013	Tue	2036	Unid. Continuous 8 8 8 8 ...	CW	(VL)
---	11979	14-7-2013	Sun	0509	Unid sending "3"	CW	(GHau)
---	11979	16-7-2013	Tue	0523	Unid sending "7"	CW	(GHau)
---	11979	17-7-2013	Wed	0529	Unid sending "7"	CW	(GHau)
---	11979	18-7-2013	Thu	0515	Unid sending "7"	CW	(GHau)
---	11979	19-7-2013	Fri	0530	Unid sending "7"	CW	(GHau)
---	11979	20-7-2013	Sat	0520	Unid sending "555" Groups of 3	CW	(GHau)
---	11979	21-7-2013	Sun	0520	Unid sending "444" Groups of 3	CW	(GHau)
---	11979	22-7-2013	Mon	0522	Unid sending "444" Groups of 3	CW	(GHau)
---	11979	23-7-2013	Tue	0520	Unid sending "888" Groups of 3	CW	(JLM)
---	11979	23-7-2013	Tue	0520	Unid sending "888" Groups of 3	CW	(GHau)
DPRK	17318.5	25-6-2013		0510	N. Korean diplo	DPRK-ARQ 600/600	(BCI)
DPRK	16006.5	25-6-2013		0659	N. Korean diplo	DPRK-ARQ 600/600	(BCI)
DPRK	12320	1-7-2013	Mon	1103	Unid North Korean embassy	DPRK-ARQ 600	(LDO)
DPRK	14530	1-7-2013	Mon	1104	Unid North Korean embassy	DPRK-ARQ 1200	(LDO)
DPRK	14850	1-7-2013	Mon	1141	Unid North Korean embassy. QSX freq 14530 kHz	DPRK-ARQ 1200	(LDO)
DPRK	20410.5	2-7-2013	Tue	0809	N. Korean diplo	DPRK-ARQ 600/600	(BCI)
DPRK	18525	11-7-2013	Thu	0817	MFA Pyongyang North Korea. All encrypted text.	DPRK-ARQ 600/600	(EW)
DPRK	16248	11-7-2013	Thu	0903	MFA Pyongyang North Korea. 600/600. ARQ Mode. All encrypted text.	DPRK-ARQ 600/600	(EW)
DPRK	14743	11-7-2013	Thu	0913	MFA Pyongyang North Korea. 600/600. ARQ Mode. All encrypted text.	DPRK-ARQ 600/600	(EW)
E06	14580	4-7-2013	Thu	0500	679 852 13 =68709	AM	(HFD)
E06	16090	4-7-2013	Thu	0600	679	AM	(HFD)
E06	5731	5-7-2013	Fri	2130	315 468 15 56172 82734 90123 74823 89309 84368 99301 73812 73456 83911 56371 89234 78212 00982 63788 468 15 00000	USB	(MPJ)
E06	5423	10-7-2013	Wed	1920	218 218 218 00000	AM	(MPJ)
E06	8144	14-7-2013	Sun	1120	218 0	AM	(HFD)
E06	5948	18-7-2013	Thu	2030	Only call 754 copiable. In broadcast sideband QRM.	USB	(MPJ)
E06	5731	19-7-2013	Fri	2030	57896 (long pause) 01324 each repeated some 5 times	USB	(MPJ)
E06	5731	19-7-2013	Fri	2130	315 468 15 56172 82734 90123 74823 89309 ...56371 89234 78212 00982 63788 468 15 00000	USB	(MPJ)
E06	5731	19-7-2013	Fri	2132	315 then into 5FGs ends with 00000	USB	(LG2)
E07	14812	1-7-2013	Mon	1900	845 1 820 88 = 17057	AM	(HFD)
E07	13412	1-7-2013	Mon	1920	845 1	AM	(HFD)
E07	11512	1-7-2013	Mon	1940	845 1	AM	(HFD)
E07	11539	4-7-2013	Thu	2010	273 0 not 553 as usual!	AM	(HFD)
E07	14812	8-7-2013	Mon	1900	845 1 ... 17457 23344 50593 14119 39113 ... 49241 12555 251_3 02531 09727 000 000. Start of msg missed	AM	(MPJ)
E07	13898	10-7-2013	Wed	1700	817 1 150 66 = 55801	AM	(HFD)
E07	12198	10-7-2013	Wed	1720	817 1	AM	(HFD)
E07	10798	10-7-2013	Wed	1740	817 1	AM	(HFD)
E07	13412	10-7-2013	Wed	1920	345 345 345 000	AM	(GHn)
E07	11539	11-7-2013	Thu	2010	553 0	AM	(HFD)
E07	10547	11-7-2013	Thu	2030	553 0	AM	(HFD)
E07	12198	17-7-2013	Wed	1720	English-Male	USB	(Steve)
E07	14812	17-7-2013	Wed	1900	845 845 845 000	USB	(MPJ/AB)
E07	13412	17-7-2013	Wed	1920	845 845 845 000	USB	(AB)
E07	13412	22-7-2013	Mon	1920	845 845 845 000	AM	(MPJ)
E07	13898	24-7-2013	Wed	1700	817 1 294 192 39551 à	AM	(Topol)
E07	13898	24-7-2013	Wed	1700	817 1 294 192 39551....67171	AM	(Topol)
E07	12198	24-7-2013	Wed	1720	817 1 294 192 39551 à	AM	(Topol)
E07	12198	24-7-2013	Wed	1727	817 1 294 192 39551....67171	AM	(Topol)
E07	14812	24-7-2013	Wed	1900	845 845 845 000	AM	(MPJ)
E07	11539	25-7-2013	Thu	2010	553 553 553 000	AM	(Topol)
E07	10547	25-7-2013	Thu	2030	553 553 553 000	AM	(Topol)
E07	11413	26-7-2013	Fri	1530	241 1 13037 7509 54 55597.....88988	AM	(Topol)
E07	10113	26-7-2013	Fri	1550	241 1 13037 7509 54 55597.....88988	AM	(Topol)
E07a	8173	3-7-2013	Wed	2000	147 147 147 000	USB	(MPJ)

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E07a	12173	6-7-2013	Sat	0800	198 0	USB	(HFD)
E07a	13973	6-7-2013	Sat	0820	198 0	USB	(HFD)
E07a	8173	10-7-2013	Wed	2000	147 147 147 000	USB	(MPJ/Ghn)
E07a	8173	17-7-2013	Wed	1900	147 147 147 000	USB	(MPJ/AB)
E07a	7473	17-7-2013	Wed	2020	147 147 147 000	USB	(AB)
E07a	7437	18-7-2013	Thu	0430	411 411 411 000	USB	(AB)
E07a	8137	18-7-2013	Thu	0450	411 411 411 000	USB	(AB)
E07a	8173	24-7-2013	Wed	2000	147 1 60108 456 96 15747.....94242	USB	(Topol)
E07a	8173	24-7-2013	Wed	2000	147 1 60108 456 96 15747 24046 99981 00242 24805 ... 58901 23171	USB	(MPJ/Ghn)
					33285 22495 94242 000 000		
E07a	7473	24-7-2013	Wed	2020	147 1 60108 456 96 15747.....94242	USB	(Topol)
E07a	5773	24-7-2013	Wed	2040	147 1 60108 456 96 15747.....94242	USB	(Topol)
E07a	12213	26-7-2013	Fri	1510	241 1 13037 7509 54 = 55597	USB	(HFD)
E07a	11413	26-7-2013	Fri	1530	241 1 13037	USB	(HFD)
E07a	10113	26-7-2013	Fri	1550	241 1 13037	USB	(HFD)
E07a	8173	31-7-2013	Wed	2000	147 1 13824 6179 61 6179 61 41174 9672 05306 45592 75985 83839	USB	(Ghn)
					... 47444 33733 79574 000 000		
E11	4909	3-7-2013	Wed	1445	287/00	USB	(HFD)
E11	16335	4-7-2013	Thu	1155	718/00	CW	(MPJ)
E11	16335	10-7-2013	Wed	1155	mostly unreadable 719/37 45177 275_3 ...	USB	(MPJ)
E11	8088	11-7-2013	Thu	1730	416/00	USB	(Ghn)
E11	16335	14-7-2013	Sun	1540	228/00	USB	(MPJ)
E11	9610	16-7-2013	Tue	1045	469/00	USB	(MPJ)
E11	17441	16-7-2013	Tue	1045	576/00	USB	(HFD)
E11	16335	24-7-2013	Wed	1155	718/00	USB	(Gwr)
E11	16335	25-7-2013	Thu	1155	718/00	USB	(Gwr)
E11	9200	25-7-2013	Thu	2000	576/00	USB	(Topol)
E11	12924	29-7-2013	Mon	0830	649/00	USB	(Topol)
E11	13424	30-7-2013	Tue	0645	517/00	USB	(AB)
E11	9610	30-7-2013	Tue	1045	469/00	USB	(Topol)
E11	9610	30-7-2013	Tue	1045	469/00	USB	(AB)
E11	9610	30-7-2013	Tue	1045	469/00	USB	(MPJ)
E11	16335	31-7-2013	Wed	1155	718/00	USB	(Gwr)
E11a	14769	3-7-2013	Wed	0533	981/10	USB	(LDO)
E11a	13722	9-7-2013	Tue	1400	985/10 07728 95330 26297 29801 40677 13888 05094 00317 16079	USB	(MPJ)
					77254. Repeats		
E11a	10487	12-7-2013	Fri	1710	957/25	USB	(MPJ)
E11a	13722	13-7-2013	Sat	1400	981/10 = 81969 18718 21238 77822 67805 54592 47996 22487	USB	(MPJ)
					52862 86809 (repeats)		
E11a	16335	15-7-2013	Mon	1540	228/30	USB	(MPJ)
E11a	14518	16-7-2013	Tue	1810	985/10 75803 43257 28933 35570 37447 44951 72844 13592 03261	USB	(MPJ)
					18206		
E11a	14518	16-7-2013	Tue	1810	985/10 Attention 75803 43257 28933 35570 37447 44951 72844	USB	(Topol)
					13592 03261 18206 Attention (repeats groups) Out		
E11a	13772	17-7-2013	Wed	1300	982/10 attention 33365 36683 52620 10126 51485 01907 37666	USB	(Ghn)
					69852 17139		
E11a	16388	19-7-2013	Fri	1110	954/31 80372 42193 33904 03_9 (becomes uncopiable)	USB	(MPJ)
E11a	10487	19-7-2013	Fri	1710	957/.. 24808 00802 99226 76280 43395 ... 92207 78966 18400 09096	USB	(MPJ)
					70858		
E11a	14518	20-7-2013	Sat	1810	982/10 Attention 51183 96049 25545 81013 11072 66366 46426	USB	(Skx)
					75863 49031 45568		
E11a	14518	23-7-2013	Tue	1810	984/10 Attention 72485 58910 88876 82979 32915 74621 69307	USB	(Ghn)
					71425 23020 43969 Attn. Message repeat. OUT.		
E11a	14518	23-7-2013	Tue	1810	984/10 Attention 72485 58910 88878 82979 82915 64821 69307	USB	(Topol)
					71425 68020 43959 Attention, rpt msg, out		
E11a	9610	24-7-2013	Wed	1045	466/35 28402 72093 24260 31628 25645 ... 64305 16639 18157	USB	(Gwr)
E11a	8088	25-7-2013	Thu	1730	415 30 65255....46230	USB	(Topol)
E11a	10487	26-7-2013	Fri	1710	951 20 25991....32116	USB	(Topol)
E11a	14518	27-7-2013	Sat	1810	980/10 Attention 05029 77634 75337 12014 31009 51254 79765	USB	(AB)
					71959 94021 09628 Attention, rpt msg, out		
E11a	14518	27-7-2013	Sat	1810	980/10 Attention 05029 77634 75337 12014 31009 51254 79765	USB	(Skx)
					71959 94021 09628		
E11a	16388	29-7-2013	Mon	1110	956/34 Attention 74880 80714 90504 ... 76075 96282 68846	USB	(Gwr)
E11a	16388	29-7-2013	Mon	1110	956 34 ??????	USB	(Topol)

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E11a	14087	29-7-2013	Mon	1710	957 2? 85521 03065 63962 ?????	USB	(Topol)
E11a	13427	31-7-2013	Wed	0900	533/30 Attention 78875 75643 15590 14257 ... 65201 79442 19586	USB	(Gwr)
E17z	16780	18-7-2013	Thu	0800	674 283 5 73621 90876 23477 38912 56567 283 5 00000	USB	(AB)
EGY	16338.7	25-6-2013		0457	Egyptian diplo	SITOR-A 100/170	(BCI)
EGY	16160	3-7-2013	Wed	1431	Egyptian embassy Manama, BHR msg to MFA Cairo	CODAN-16	(BCI)
EGY	16161.7	3-7-2013	Wed	1452	Egyptian embassy Manama, BHR wkg MFA Cairo	SITOR-A 100/170	(BCI)
EGY	14616.7	6-7-2013	Sat	0825	MFA Cairo	SITOR-A	(Brit)
EV02	7345	23-7-2013	Tue	1555	Mark Twain story being read with a break every few sentences	LSB	(JLM)
G06	5783	1-7-2013	Mon	1800	564 0	AM	(HFD)
G06	5783	1-7-2013	Mon	1803	564 564 564 00000	AM	(Topol)
G06	11424	5-7-2013	Fri	1900	239 239 239 00000	USB	(MPJ)
G06	9268	5-7-2013	Fri	2000	238 239 239 00000	AM	(GHn)
G06	5783	8-7-2013	Mon	1800	564 22222 for 4 minutes, 564 and nothing further. Is that all for this stn?	USB	(MPJ)
G06	5943	12-7-2013	Fri	1930	218 987 15 72819 73234 56371 83241 99356 73267 99473 00779 37481 98234 78192 33465 72910 88352 89110 987 15 00000	USB	(MPJ)
G06	9268	19-7-2013	Fri	2000	239 239 239 00000	USB	(MPJ)
G06	6887	25-7-2013	Thu	1830	842 799 15 62738 92212 22637 88411 73382 93745 99473 89311 22379 92143 67291 72663 83912 77281 82921 799 15 00000	AM	(Topol)
G06	6887	25-7-2013	Thu	1830	842 799 15 62738 92012 22637 88411 73382 93745 99473 89311 00379 92143 67291 70663 83912 77281 82901 799 15 00000	USB	(MPJ)
G06	5943	26-7-2013	Fri	1930	218 987 15 72819 73234 56371 83241 99356 73267 99473 00779 37481 98234 78192 33465 72910 88352 89110 987 15 00000] 1936z Fair	AM	(Topol)
G06	5943	26-7-2013	Fri	1930	218 987 15 72819 73234 56371 832271 99356 63267 46473 22479 37483 98234 78192 33465 72912 88352 89112 00000	USB	(GHn)
G11	5815	2-7-2013	Tue	1755	278/3_unreadable	USB	(MPJ)
G11	5815	7-7-2013	Sun	1755	278/_0 51018 56965 _3601 07_75 77927 ... 99085 71880 517_2 85051 77028 distorted	USB	(MPJ)
G11	3815	7-7-2013	Sun	2000	262/00	USB	(MPJ)
G11	5815	12-7-2013	Fri	1325	299/00	USB	(HFD)
G11	5815	12-7-2013	Fri	1325	299/00	USB	(Gwr)
G11	3815	14-7-2013	Sun	2000	262/00	USB	(MPJ)
G11	5815	16-7-2013	Tue	1755	270/00	USB	(MPJ)
G11	5815	16-7-2013	Tue	1755	270/00	USB	(Topol)
G11	5815	21-7-2013	Sun	1755	270/00	USB	(Topol)
G11	3815	21-7-2013	Sun	2000	262/00	USB	(Topol)
G11	5815	23-7-2013	Tue	1755	270/00	USB	(Topol)
G11	3815	26-7-2013	Fri	2000	262/.. Achtung 17196 24899 54952 08692 75977 16797 ...	USB	(GHn)
G11	3815	28-7-2013	Sun	2000	266/38 Attention 97350 17196 24899 54952 08692 ... 46366 21454 55452 33122 51188	USB	(MPJ/GHn)
G11	3815	28-7-2013	Sun	2000	266/38 Achtung 97350 17196 24899 54952 08692 75937 16097 08534 08380 36728 45967 05986	USB	(Skx)
G11	5815	30-7-2013	Tue	1755	270/00	USB	(Topol)
HM01	11635	4-7-2013	Thu	1040	Female synthesized voice in Spanish with 5FGs alternating with RDFT data transmissions	AM/RDFT	(Steve)
HM01	12180	4-7-2013	Thu	1040	Female synthesized voice in Spanish with 5FGs alternating with RDFT data transmissions	AM/RDFT	(Steve)
HM01	5855	7-7-2013	Sun	1010		AM/RDFT	(westt1us)
HM01	17540	13-7-2013	Sat	2330	50266 87217 71305 51577 24442 41671	AM/RDFT	(Dan)
HM01	11117.5	21-7-2013	Sun	2114	Spanish male: 3552. ...	AM ááá	(LG2)
HM01	10345	22-7-2013	Mon	0600	63545 68122 64274 24447 41676 26145	AM/RDFT	(WM2)
HM01	9330	22-7-2013	Mon	0658	63545 68122 64274 24447 41676 26145	AM/RDFT	(WM2)
HM01	9330	22-7-2013	Mon	0756	63545 68122 64274 24447 41676 26145	AM/RDFT	(WM2)
HM01	9065	22-7-2013	Mon	0800	63545 68122 64274 24447 41676 26145	AM/RDFT	(WM2)
HM01	10715	22-7-2013	Mon	2200	63545 68122 64274 24447 41676 26145	AM/RDFT	(WM2)
HM01	5855	23-7-2013	Tue	0457	5FG by Female mechanical Spanish voice until 0459 stopped listening.	AM/RDFT	(Steve)
HM01	14375	23-7-2013	Tue	0508	5FG by Female mechanical Spanish voice followed by RDFT	AM/RDFT	(Steve)
HM01	10345	23-7-2013	Tue	0632	5FG by Female mechanical Spanish voice followed by RDFT	AM/RDFT	(Steve)
HM01	5855	23-7-2013	Tue	1000	5FG by Female mechanical Spanish voice followed by RDFT //9155 kHz	AM/RDFT	(Steve)
HM01	9155	23-7-2013	Tue	1000	5FG by Female mechanical Spanish voice followed by RDFT //5855 kHz	AM/RDFT	(Steve)
HM01	9065	24-7-2013	Wed	0825	Female Auto Voice with continuous Numbers in Spanish	AM/RDFT	(DMNZ)

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HM01	11530	25-7-2013	Thu	1721	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	16180	25-7-2013	Thu	2148	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	11635	26-7-2013	Fri	1839	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	16180	27-7-2013	Sat	2129	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	9155	28-7-2013	Sun	0945	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	9240	29-7-2013	Mon	0945	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	9155	29-7-2013	Mon	1741	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	11530	29-7-2013	Mon	1741	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	11635	29-7-2013	Mon	1758	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	12180	30-7-2013	Tue	1045	Female synthesized voice in Spanish with a five digit number alternating with RDFT data transmissions //11635	AM/RDFT	(Steve)
HM01	11635	30-7-2013	Tue	1045	Female synthesized voice in Spanish with a five digit number alternating with RDFT data transmissions //12180	AM/RDFT	(Steve)
HM01	11435	31-7-2013	Wed	1640	07022 03631 37672 62111 66161	AM/RDFT	(DSch)
HM01	11530	31-7-2013	Wed	1656	07022 03631 37672 62111 66161	AM/RDFT	(DSch)
HM01	11635	31-7-2013	Wed	1757	07022 03631 37672 62111 66161	AM/RDFT	(DSch)
HM01	11635	31-7-2013	Wed	2114	07022 03631 37672 62111 66161	AM/RDFT	(DSch)
M01	4904	2-7-2013	Tue	2000	025 454 30 = 68007 54301 04846 37072 48467 ... 71357 67517 61719 75612 96531 = = 453 30 000. //4905, 4906, 4907 kHz	CW	(MPJ)
M01	4766	4-7-2013	Thu	1520	i.p. 84416 92823 21564 92142 78079 44366 19045 79132 93830 42272 47317 18595 17502 73648 90829 40261 19844 36308 23553 19414 24545 20377 63922 81251 85654 77143 7564. 390.9 37141 1 = = 212 212 50 50 000	CW	(JPL-FNL)
M01	5280	4-7-2013	Thu	1800	025 07269 90181 93725 50529 80529 ... 40600 29248 04190 42041 28553 614 614 30 30 000. Many faults. Training session? //5279, 5281, 5283 kHz	CW	(MPJ)
M01	5280	4-7-2013	Thu	1801	i.p. mostly unreadable	CW	(JPL-RUS)
M01	4905	11-7-2013	Thu	2000	025 718 30 = = 64726 91353 59207 65339 20860 ... 41279 43709 29272 18308 71830 000 //4906 kHz	CW	(MPJ)
M01	6435	13-7-2013	Sat	1500	025 728 30 = = 31440 02976 66639 54885 62757 ... 32621 46916 14122 65144 34719 = = 728 30 000 //6436 kHz	CW	(MPJ)
M01	5280	16-7-2013	Tue	1800	025 Unreadable/fading ... 770 84496 84496 ... 493...	CW	(MPJ)
M01	4905	16-7-2013	Tue	2000	025 401 401 30 30 = = 01054 79113 (791313) 23976 75980 17096 ... 05806 49323 49332788 2171778178 379 7897 70196 70196 = = 401 401 30 30 000	CW	(MPJ)
M01	4905	25-7-2013	Thu	2000	025 398 30 53560 71576 61897 94525 66048 ... 20850 04257 33662 15546 08316 94706 00705 43657 17178 31234 69811 01418 60806 86404 74414 17819 389 389 30 30.	CW	(MPJ)
M01a	3318	10-7-2013	Wed	1937	i.p. 316 316 316 230 50 230 50 (Cont&Ed)	CW	(JPL-FNL)
M01a	3612	16-7-2013	Tue	2306	i.p. 619 10 = 33533 52440 03561 1..20 64244 71616 86080 55772 79652 30226 = 619 10 111 000	CW	(JPL-RUS)
M01b	5941.13	4-7-2013	Thu	1505	159 61979 03874 0_041 37_60 ... (becomes unreadable). //5942.3 kHz	CW	(MPJ)
M01b	5806.1	4-7-2013	Thu	1842	936 121 121 35 35 = = 39863 58619 90843 13026 45950 ... 511_0 12809 74082 40713 53391 = = 121 121 35 35 000. Used a multitude of frequencies //5066.4, 5067.4, 5803, 5803.9, 5805, 5807.3 5808.4 kHz	CW	(MPJ)
M01b	5466.1	5-7-2013	Fri	1902	336 121 35 = = 39863 58619 90843 13026 45950 ... 51110 12809 74082 40713 53391 = = 121 35 000. //5076.1, 5465, 5467.2 kHz	CW	(MPJ)
M01b	5736.1	8-7-2013	Mon	1809	364 121 35 = = 39863 58619 90843 13026 45950 ... 51110 12809 74082 40713 53391 = = 121 35 35 000. //5126.1 5737.27	CW	(MPJ)
M01b	5476.1	8-7-2013	Mon	1915	858 121 35 = = 39863 58619 90843 13026 45950 ... 51110 12809 74082 40713 53391 = = 121 35 000. //5148.8 5477.3 5479.3 5473.9	CW	(MPJ)
M01b	5476	8-7-2013	Mon	1915	858 908 43 13026	CW	(FN)
M01b	5151	8-7-2013	Mon	1915	858 908 43 13026	CW	(FN)
M01b	5804.14	11-7-2013	Thu	1942	936 121 35 = = 39863 58619 90843 13026 45950 ... 51110 12809 74082 40713 53391 = = 121 35 000 //5066.14, 5067.3, 5807.26 kHz	CW	(MPJ)
M01b	5076.14	12-7-2013	Fri	1902	336 121 35 = = 39863 58619 90843 13026 45950 ... 51110 92809 74082 40713 53395 = = 121 35 000 //5075, 5077.27, 5466.13 kHz	CW	(MPJ)
M01b	5341.14	12-7-2013	Fri	2010	467 121 35 = = 39863 58619 90843 13026 45950 ... 51110 12809 74082 40713 53391 = = 121 35 000 //4895 4896.5 4897.27, 5340, 5342.27 kHz	CW	(MPJ)
M01b	5151.14	15-7-2013	Mon	1915	858 Only callsign readable. //5150 Jammed //5152.26 kHz	CW	(MPJ)
M01b	5810	19-7-2013	Fri	1515	ip ending w/88377 88377 831 831 30 30 000	CW	(HFD)
M01b	5341.13	19-7-2013	Fri	2010	467 121 35 = = 39863 _____ 90843 13026 45950 ... 51110 12809 74082 40713 53391 = = 121 35 000	CW	(MPJ)

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M01b	5736	22-7-2013	Mon	1810	i.p. ... 51110 12809 74082 40713 53392 = = 121 35 000. //5737.12	CW	(MPJ)
M01b	5151.13	22-7-2013	Mon	1915	i.p. 121 35 = = 39 ____ ... 13026 45950 01008 90179 ... 51110 12809 74082 40713 53391 = = 121 35 000	CW	(MPJ)
M01b	5806.14	25-7-2013	Thu	1940	936 121 35 = = 39863 58619 90843 13026 45950 ... 51110 12809 74082 40713 53391 = = 121 35 000 //5066.14 5067.28 5068.4 5807.25	CW	(MPJ)
M01b	5941.13	25-7-2013	Thu	M01b	159 831 30 03874 01041 37960 25076 49815 ... 05505 11649 59129 56901 97377 = = 831 30. //5940 5942.27	CW	(MPJ)
M01b	5735	29-7-2013	Mon	1815 53391 = = 121 35	CW	(Topol)
M03	7837	2-7-2013	Tue	1115	272/00	CW	(MPJ)
M03	6524	2-7-2013	Tue	1535	798/00	CW	(MPJ)
M03	7837	3-7-2013	Wed	1115	650/00	CW	(MPJ)
M03	7837	4-7-2013	Thu	1115	650/00	CW	(MPJ)
M03	9176	8-7-2013	Mon	1700	257 6151 74 33861 68228 03805 09222 45656 ... 03785 30989 66128 21103 13893 000 000	CW	(MPJ)
M03	7837	9-7-2013	Tue	1115	275/36 = = 99663 40616 62722 01905 93547 ... _____ (fade) 31510 24960 07859 = = 275/36 (repeats)	CW	(MPJ)
M03	6524	9-7-2013	Tue	1535	798/00	CW	(MPJ)
M03	7837	11-7-2013	Thu	1115	650/00	CW	(MPJ)
M03	6524	13-7-2013	Sat	1535	798/00	CW	(MPJ)
M03	7837	14-7-2013	Sun	1320	437/00	CW	(MPJ)
M03	7837	16-7-2013	Tue	1115	272/00	CW	(MPJ)
M03	6524	16-7-2013	Tue	1535	798/00	CW	(MPJ)
M03	7837	17-7-2013	Wed	1115	658 ... 67971 2_296 49895 74355 ... 36461 44717 75211 04377 78486 = = 658/31 658/31	CW	(MPJ)
M03	7837	18-7-2013	Thu	1320	437/00 = = 000	CW	(MPJ/JPL)
M03	6524	20-7-2013	Sat	1535	790/00	CW	(MPJ)
M03	7837	25-7-2013	Thu	1115	650/00	CW	(Gwr)
M03	7837	28-7-2013	Sun	1320	437/00	CW	(MPJ)
M03	7837	30-7-2013	Tue	1115	272/00	CW	(MPJ)
M03	7837	30-7-2013	Tue	1115	272/00 = = 000	CW	(AB)
M03	6520	30-7-2013	Tue	1535	798/00 = = 000	CW	(AB)
M08a	9155	7-7-2013	Sun	1000	i.p.	CW	(westt1us)
M12	6857	1-7-2013	Mon	0430	850 0	CW	(HFD)
M12	7557	1-7-2013	Mon	0450	850 0	CW	(HFD)
M12	13972	1-7-2013	Mon	1300	944 1	CW	(HFD)
M12	13972	1-7-2013	Mon	1300	944 1 1779 165 32505	CW	(FN)
M12	13472	1-7-2013	Mon	1320	944 1	CW	(HFD)
M12	13472	1-7-2013	Mon	1320	944 1 1779 165 32505	CW	(FN)
M12	11472	1-7-2013	Mon	1340	944 1	CW	(HFD)
M12	11472	1-7-2013	Mon	1340	944 1 1779 165 32505	CW	(FN)
M12	11435	1-7-2013	Mon	1600	938 1	CW	(HFD)
M12	11435	1-7-2013	Mon	1600	938 1 439 44 29013	CW	(FN)
M12	10598	1-7-2013	Mon	1620	938 1 439 44 29013	CW	(FN)
M12	10598	1-7-2013	Mon	1620	938 1	CW	(HFD)
M12	9327	1-7-2013	Mon	1640	938 1 439 44 29013	CW	(FN)
M12	9327	1-7-2013	Mon	1640	938 1	CW	(HFD)
M12	9176	1-7-2013	Mon	1700	257 1	CW	(HFD)
M12	9176	1-7-2013	Mon	1700	257 1 2321 79 55946	CW	(FN)
M12	7931	1-7-2013	Mon	1720	257 1 2321 79 55946	CW	(FN)
M12	7931	1-7-2013	Mon	1720	257 1	CW	(HFD)
M12	6904	1-7-2013	Mon	1740	257 1	CW	(HFD)
M12	6904	1-7-2013	Mon	1740	257 1 2321 79 55946	CW	(FN)
M12	9176	1-7-2013	Mon	1800	257 1 8172 65 13842	CW	(FN)
M12	7931	1-7-2013	Mon	1820	257 1 8172 65 13842	CW	(FN)
M12	6904	1-7-2013	Mon	1840	257 1 8172 65 13842	CW	(FN)
M12	9176	1-7-2013	Mon	1900	257 7252 87 84657 04366 37844 74405 20160 ... 44330 82898 29698 34082 03543 000 000	CW	(MPJ)
M12	9176	1-7-2013	Mon	1900	257 1 7252 87 84657	CW	(FN)
M12	7931	1-7-2013	Mon	1920	257 1 7252 87 84657	CW	(FN)
M12	6904	1-7-2013	Mon	1940	257 1 7252 87 84657	CW	(FN)
M12	10343	2-7-2013	Tue	1830	124 1	CW	(HFD)
M12	10343	2-7-2013	Tue	1830	124 1 6370 69 69216	CW	(FN)

Code	Freq.	date	day	UTC	remarks	mode	contributor
M12	9264	2-7-2013	Tue	1850	124 1 6370 69 69216	CW	(FN)
M12	9264	2-7-2013	Tue	1850	124 1	CW	(HFD)
M12	8116	2-7-2013	Tue	1910	124 1	CW	(HFD)
M12	8116	2-7-2013	Tue	1910	124 1 6370 69 69216	CW	(FN)
M12	8116	2-7-2013	Tue	1910	124 1 6370 69 5_216 18828 27395 45758 17026 ... 68299 91841 48622 07520 36934 000 000	CW	(MPJ)
M12	14492	3-7-2013	Wed	1500	944 1	CW	(HFD)
M12	14492	3-7-2013	Wed	1500	944 1 1779 165 32505	CW	(FN)
M12	13392	3-7-2013	Wed	1520	944 1 1779 165 32505	CW	(FN)
M12	13392	3-7-2013	Wed	1520	944 1	CW	(HFD)
M12	11092	3-7-2013	Wed	1540	944 1	CW	(HFD)
M12	11092	3-7-2013	Wed	1540	944 1 1779 165 32505	CW	(FN)
M12	8047	3-7-2013	Wed	1700	463 1 1859 92 24939	CW	(FN)
M12	8047	3-7-2013	Wed	1700	463 1 1859 92 24939 23286 08744 26392 63769 ... 60961 08079 62933 95201 03059 000 000	CW	(MPJ)
M12	8047	3-7-2013	Wed	1700	463 1	CW	(HFD)
M12	9264	3-7-2013	Wed	1720	463 1 1859 92 24939	CW	(FN)
M12	5788	3-7-2013	Wed	1740	463 1 1859 92 24939	CW	(FN)
M12	5788	3-7-2013	Wed	1740	463 1	CW	(HFD)
M12	11435	3-7-2013	Wed	1830	938 3827 55 02076 69905 96994 22408 26945 ... 85238 84870 33422 27033 61876 000 000	CW	(MPJ)
M12	11435	3-7-2013	Wed	1830	938 1 3827 55 02076	CW	(FN)
M12	10598	3-7-2013	Wed	1850	938 1 3827 55 02076	CW	(FN)
M12	9327	3-7-2013	Wed	1910	938 1 3827 55 02076	CW	(FN)
M12	9397	3-7-2013	Wed	2100	398 398 398 000	CW	(MPJ)
M12	9379	3-7-2013	Wed	2100	398 0	CW	(HFD)
M12	16869	3-7-2013	Wed	2110	851 1 3521 139 39875 71782 17458 03177 48783 ... 60924 64592 38207 72943 78625 000 000	CW	(MPJ)
M12	14869	3-7-2013	Wed	2110	851 1	CW	(HFD)
M12	7979	3-7-2013	Wed	2120	398 0	CW	(HFD)
M12	13569	3-7-2013	Wed	2130	851 1	CW	(HFD)
M12	12179	3-7-2013	Wed	2150	851 1 should be on 12169	CW	(HFD)
M12	13926	4-7-2013	Thu	1310	919/000	CW	(MPJ)
M12	10343	4-7-2013	Thu	1800	124 1	CW	(HFD)
M12	9264	4-7-2013	Thu	1820	124 1	CW	(HFD)
M12	8116	4-7-2013	Thu	1840	124 1	CW	(HFD)
M12	9176	4-7-2013	Thu	1900	257 1 5265 68 91357 35388 01296 64348 98180 ... 44282 46955 92613 82067 02798 000 000	CW	(MPJ)
M12	14869	6-7-2013	Sat	2110	851 1 3521 139 39875	CW	(FN)
M12	13569	6-7-2013	Sat	2130	851 1 3521 139 39875	CW	(FN)
M12	12169	6-7-2013	Sat	2150	851 1 3521 139 39875	CW	(FN)
M12	6857	8-7-2013	Mon	0430	850 850 850 000	CW	(FN)
M12	7557	8-7-2013	Mon	0450	850 850 850 000	CW	(FN)
M12	13972	8-7-2013	Mon	1300	944 1 7385 137 42284	CW	(FN)
M12	13472	8-7-2013	Mon	1320	944 1 7385 137 42284	CW	(FN)
M12	11472	8-7-2013	Mon	1340	944 1 7385 137 42284	CW	(FN)
M12	11435	8-7-2013	Mon	1600	938 1 8498 118 47063	CW	(FN)
M12	10598	8-7-2013	Mon	1620	938 1 8498 118 47063	CW	(FN)
M12	9327	8-7-2013	Mon	1640	938 1 8498 118 47063	CW	(FN)
M12	9176	8-7-2013	Mon	1700	257 1 6151 74 33861	CW	(FN)
M12	7931	8-7-2013	Mon	1720	257 1 6151 74 33861	CW	(FN)
M12	6904	8-7-2013	Mon	1740	257 1 6151 74 33861	CW	(FN)
M12	9176	8-7-2013	Mon	1800	257 1 2567 62 94743	CW	(FN)
M12	7931	8-7-2013	Mon	1820	257 1 2567 62 94743	CW	(FN)
M12	6904	8-7-2013	Mon	1840	257 1 2567 62 94743	CW	(FN)
M12	9176	8-7-2013	Mon	1900	257 1 1951 86 28520	CW	(FN)
M12	7931	8-7-2013	Mon	1920	257 1 1951 86 28520	CW	(FN)
M12	6904	8-7-2013	Mon	1940	257 1 1951 86 28520	CW	(FN)
M12	10343	9-7-2013	Tue	1830	124 1 1655 55 86072	CW	(FN)
M12	9264	9-7-2013	Tue	1850	124 1 1655 55 86072	CW	(FN)
M12	8116	9-7-2013	Tue	1910	124 1 1655 55 86072	CW	(FN)
M12	14492	10-7-2013	Wed	1500	944 1 7385 137 42284	CW	(FN)
M12	14492	10-7-2013	Wed	1500	7385 137 42284 54861 37623 41405 49490 ... 67417 78938 54211	CW	(MPJ)

Code	Freq.	date	day	UTC	remarks	mode	contributor
					12701 87451.		
M12	13392	10-7-2013	Wed	1520	944 1 7385 137 42284	CW	(FN)
M12	11092	10-7-2013	Wed	1540	7385 137 42284 54861 37623 41405 49490 ... 67417 78938 54211 12701 87451.	CW	(MPJ)
M12	11092	10-7-2013	Wed	1540	944 1 7385 137 42284	CW	(FN)
M12	8047	10-7-2013	Wed	1700	463 1 8745 94 10495	CW	(FN)
M12	6802	10-7-2013	Wed	1720	463 1 8745 94 10495	CW	(FN)
M12	5788	10-7-2013	Wed	1740	463 1 8745 94 10495	CW	(FN)
M12	11435	10-7-2013	Wed	1830	938 1 7110 51 30292	CW	(FN)
M12	10598	10-7-2013	Wed	1850	938 1 7110 51 30292	CW	(FN)
M12	9327	10-7-2013	Wed	1910	938 1 7110 51 30292	CW	(FN)
M12	9379	10-7-2013	Wed	2100	398 1 2328 73 07073	CW	(FN)
M12	9379	10-7-2013	Wed	2100	398 1 2328 73 07073	CW	(FN)
M12	14869	10-7-2013	Wed	2110	851 1 ...	CW	(FN)
M12	14869	10-7-2013	Wed	2110	851 1 ...	CW	(FN)
M12	7979	10-7-2013	Wed	2120	398 1 2328 73 07073	CW	(FN)
M12	7979	10-7-2013	Wed	2120	398 1 2328 73 07073	CW	(FN)
M12	13569	10-7-2013	Wed	2130	851 1 547 63 75315	CW	(FN)
M12	13569	10-7-2013	Wed	2130	851 1 ...	CW	(FN)
M12	6879	10-7-2013	Wed	2140	398 1 2328 73 07073	CW	(FN)
M12	6879	10-7-2013	Wed	2140	398 1 2328 73 07073	CW	(FN)
M12	12169	10-7-2013	Wed	2150	851 1 547 63 75315	CW	(FN)
M12	12169	10-7-2013	Wed	2150	851 1 547 63 75315 ??	CW	(FN)
M12	7984	11-7-2013	Thu	0630	911 911 911 000	CW	(FN)
M12	9184	11-7-2013	Thu	0650	911 911 911 000	CW	(FN)
M12	13926	11-7-2013	Thu	1310	919 0	CW	(HFD)
M12	13926	11-7-2013	Thu	1310	919 919 919 000	CW	(MPJ)
M12	12126	11-7-2013	Thu	1330	919 0	CW	(HFD)
M12	10343	11-7-2013	Thu	1700	124 1 2506 80 72790	CW	(FN)
M12	10343	11-7-2013	Thu	1700	124 1	CW	(HFD)
M12	9264	11-7-2013	Thu	1720	124 1 2506 80 72790	CW	(FN)
M12	9264	11-7-2013	Thu	1720	124 1	CW	(HFD)
M12	8116	11-7-2013	Thu	1740	124 1	CW	(HFD)
M12	6904	11-7-2013	Thu	1740	257 1 4586 99???	CW	(FN)
M12	8116	11-7-2013	Thu	1740	124 1 2506 80 72790	CW	(FN)
M12	10343	11-7-2013	Thu	1800	124 1 5776 88 65328	CW	(FN)
M12	9264	11-7-2013	Thu	1820	124 1 5776 88 65328	CW	(FN)
M12	8116	11-7-2013	Thu	1840	124 1 5776 88 65328	CW	(FN)
M12	9176	11-7-2013	Thu	1900	257 1 4778 68 82575	CW	(FN)
M12	7931	11-7-2013	Thu	1920	257 1 4778 68 82575	CW	(FN)
M12	6904	11-7-2013	Thu	1940	257 1 4778 68 82575	CW	(FN)
M12	13926	13-7-2013	Sat	1310	919 919 919 000	CW	(FN)
M12	12126	13-7-2013	Sat	1330	919 919 919 000	CW	(FN)
M12	14869	13-7-2013	Sat	2110	851 1 568 63 95313	CW	(FN)
M12	13569	13-7-2013	Sat	2130	851 1 568 63 95313	CW	(FN)
M12	12179	13-7-2013	Sat	2150	851 1 568 63 95313	CW	(FN)
M12	13972	15-7-2013	Mon	1300	944 1 4867 159 88867 67011 90281 82768 05605 ... 88913 36466 95878 66646 69190 000 000	CW	(MPJ)
M12	13972	15-7-2013	Mon	1300	944 1 4867 159 88867	CW	(FN)
M12	13472	15-7-2013	Mon	1320	944 1 4867 159 88867	CW	(FN)
M12	11472	15-7-2013	Mon	1340	944 1 4867 159 88867	CW	(FN)
M12	11435	15-7-2013	Mon	1600	938 1 6701 106 30650	CW	(FN)
M12	10598	15-7-2013	Mon	1620	938 1 6701 106 30650	CW	(FN)
M12	9327	15-7-2013	Mon	1640	938 1 6701 106 30650	CW	(FN)
M12	9176	15-7-2013	Mon	1700	257 1 1389 77 08597	CW	(FN)
M12	7931	15-7-2013	Mon	1720	257 1 1389 77 08597	CW	(FN)
M12	6904	15-7-2013	Mon	1740	257 1 1389 77 08597	CW	(FN)
M12	9176	15-7-2013	Mon	1800	257 1 9036 58 88895	CW	(FN)
M12	7931	15-7-2013	Mon	1820	257 1 9036 58 88895	CW	(FN)
M12	6904	15-7-2013	Mon	1840	257 1 9036 58 88895	CW	(FN)
M12	9176	15-7-2013	Mon	1900	257 1 7937 88 18759	CW	(FN)
M12	7931	15-7-2013	Mon	1920	257 1 7937 88 18759	CW	(FN)

Code	Freq.	date	day	UTC	remarks	mode	contributor
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M12	10343	16-7-2013	Tue	1830	124 1 1107 69 03731	CW	(FN)
M12	9264	16-7-2013	Tue	1850	124 1 1107 69 03731	CW	(FN)
M12	8116	16-7-2013	Tue	1910	124 1 1107 69 03731	CW	(FN)
M12	14492	17-7-2013	Wed	1500	944 1 4867 159 88867	CW	(FN)
M12	13392	17-7-2013	Wed	1520	944 1 4867 159 88867	CW	(FN)
M12	11092	17-7-2013	Wed	1540	944 1 4867 159 88867	CW	(FN)
M12	8047	17-7-2013	Wed	1700	463 1 8907 79 68859	CW	(FN)
M12	8047	17-7-2013	Wed	1700	463 1 8907 79 68859 78435 61625 65992 90449 ... 65191 69063 86767 50808 07992 000 000	CW	(MPJ)
M12	6802	17-7-2013	Wed	1720	463 1 8907 79 68859	CW	(FN)
M12	5788	17-7-2013	Wed	1740	463 1 8907 79 68859	CW	(FN)
M12	11435	17-7-2013	Wed	1830	938 1	CW	(HFD)
M12	11435	17-7-2013	Wed	1830	938 1 9418 67 57996	CW	(FN)
M12	10598	17-7-2013	Wed	1850	938 1 9418 67 57996	CW	(FN)
M12	10598	17-7-2013	Wed	1850	938 1	CW	(HFD)
M12	9327	17-7-2013	Wed	1910	938 1 9418 67 57996	CW	(FN)
M12	9327	17-7-2013	Wed	1910	938 1	CW	(HFD)
M12	9379	17-7-2013	Wed	2100	398 398 398 000	CW	(MPJ)
M12	9379	17-7-2013	Wed	2100	398 398 398 000	CW	(FN)
M12	14869	17-7-2013	Wed	2110	851 1 9581 89 51697	CW	(FN)
M12	7979	17-7-2013	Wed	2120	398 398 398 000	CW	(FN)
M12	13569	17-7-2013	Wed	2130	851 1 9581 89 51697	CW	(FN)
M12	12179	17-7-2013	Wed	2150	851 1 9581 89 51697	CW	(FN)
M12	13926	18-7-2013	Thu	1310	919 1 5086 147 11934	CW	(FN)
M12	13926	18-7-2013	Thu	1310	919 5086 147 11934 24956 58599 07490 65038 ... 25548 08226 24323 40025 02904 000 000	CW	(MPJ)
M12	12126	18-7-2013	Thu	1330	919 1 5086 147 11934	CW	(FN)
M12	10926	18-7-2013	Thu	1350	919 1 5086 147 11934	CW	(FN)
M12	10343	18-7-2013	Thu	1700	124 1 9473 71 42467	CW	(FN)
M12	9176	18-7-2013	Thu	1700	257 1 5622 50 99437	CW	(FN)
M12	10343	18-7-2013	Thu	1700	124 9473 71 42467 57271 21501 000 000	CW	(MPJ)
M12	9264	18-7-2013	Thu	1720	124 1 9473 71 42467	CW	(FN)
M12	7931	18-7-2013	Thu	1720	257 1 5622 50 99437	CW	(FN)
M12	8116	18-7-2013	Thu	1740	124 1 9473 71 42467	CW	(FN)
M12	6904	18-7-2013	Thu	1740	257 1 5622 50 99437	CW	(FN)
M12	10343	18-7-2013	Thu	1800	124 1 7258 111 95771	CW	(FN)
M12	9264	18-7-2013	Thu	1820	124 1 7258 111 95771	CW	(FN)
M12	8116	18-7-2013	Thu	1840	124 1 7258 111 95771	CW	(FN)
M12	9176	18-7-2013	Thu	1900	257 1 6507 42 67002	CW	(FN)
M12	7931	18-7-2013	Thu	1920	257 1 6507 42 67002	CW	(FN)
M12	6904	18-7-2013	Thu	1940	257 1 6507 42 67002	CW	(FN)
M12	13926	20-7-2013	Sat	1310	919 1 5086 147 11934 24413 58599 07490 65038 ... 25548 08226 24323 40025 02904 000 000	CW	(MPJ)
M12	10926	20-7-2013	Sat	1458	919 i.p. ... 25548 08226 24323 40025 02904 000 000	CW	(MPJ)
M12	14869	20-7-2013	Sat	2110	851 1 9581 89 51697 99329 40768 23111 74972 ... 58199 82522 54089 09914 37308 000 000	CW	(MPJ)
M12	6857	22-7-2013	Mon	0430	850 850 850 000	CW	(FN)
M12	7557	22-7-2013	Mon	0450	850 850 850 000	CW	(FN)
M12	13972	22-7-2013	Mon	1300	944 944 944 000	CW	(FN)
M12	13972	22-7-2013	Mon	1300	944 994 994 000	CW	(MPJ)
M12	13472	22-7-2013	Mon	1320	944 944 944 000	CW	(FN)
M12	11435	22-7-2013	Mon	1600	938 1 4591 118 83464	CW	(FN)
M12	10598	22-7-2013	Mon	1620	938 1 4591 118 83464	CW	(FN)
M12	9327	22-7-2013	Mon	1640	938 1 4591 118 83464	CW	(FN)
M12	9176	22-7-2013	Mon	1700	257 1 3344 78 60834	CW	(FN)
M12	7931	22-7-2013	Mon	1720	257 1 3344 78 60834	CW	(FN)
M12	6904	22-7-2013	Mon	1740	257 1 3344 78 60834	CW	(FN)
M12	9176	22-7-2013	Mon	1800	257 1 6029 65 29337	CW	(FN)
M12	7931	22-7-2013	Mon	1820	257 1 6029 65 29337	CW	(FN)
M12	6904	22-7-2013	Mon	1840	257 1 6029 65 29337	CW	(FN)
M12	9176	22-7-2013	Mon	1900	257 1 1419 118 63838	CW	(FN)

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M12	7931	22-7-2013	Mon	1920	257 1 1419 118 63838	CW	(FN)
M12	6904	22-7-2013	Mon	1940	257 1 1419 118 63838	CW	(FN)
M12	10343	23-7-2013	Tue	1830	124 1 2918 66 58524	CW	(FN)
M12	9264	23-7-2013	Tue	1850	124 1 2918 66 58524	CW	(FN)
M12	8116	23-7-2013	Tue	1910	124 1 2918 66 58524	CW	(FN)
M12	8116	23-7-2013	Tue	1910	124 1 2918 86 52524 22441 98804 83805 08400 ... 27471 33820 25864 79865 38120 000 000	CW	(MPJ)
M12	14492	24-7-2013	Wed	1500	944 944 944 000	CW	(Gwr)
M12	14492	24-7-2013	Wed	1500	944 944 944 000	CW	(FN)
M12	14492	24-7-2013	Wed	1500	944 994 994 000	CW	(MPJ)
M12	13392	24-7-2013	Wed	1520	944 944 944 000	CW	(FN)
M12	8047	24-7-2013	Wed	1700	463 1 8885 95 77957	CW	(FN)
M12	6802	24-7-2013	Wed	1720	463 1 8885 95 77957	CW	(FN)
M12	5788	24-7-2013	Wed	1740	463 1 8885 95 77957	CW	(FN)
M12	11435	24-7-2013	Wed	1830	938 1 4562 64 23968	CW	(FN)
M12	10598	24-7-2013	Wed	1850	938 1 4562 64 23968	CW	(FN)
M12	9327	24-7-2013	Wed	1910	938 1 4562 64 23968	CW	(FN)
M12	14869	24-7-2013	Wed	2110	851 1 3291 121 59880	CW	(FN)
M12	7979	24-7-2013	Wed	2120	398 398 398 000	CW	(FN)
M12	13569	24-7-2013	Wed	2130	851 1 3291 121 59880	CW	(FN)
M12	12179	24-7-2013	Wed	2150	851 1 3291 121 59880	CW	(FN)
M12	7984	25-7-2013	Thu	0630	911 911 911 000	CW	(FN)
M12	9184	25-7-2013	Thu	0650	911 911 911 000	CW	(FN)
M12	12126	25-7-2013	Thu	1330	010 010 010 000	CW	(Gwr)
M12	9176	25-7-2013	Thu	1700	257 1 3602 91 15817	CW	(FN)
M12	10343	25-7-2013	Thu	1700	124 1 1239 77 87623	CW	(FN)
M12	7931	25-7-2013	Thu	1720	257 1 3602 91 15817	CW	(FN)
M12	9264	25-7-2013	Thu	1720	124 1 1239 77 87623	CW	(FN)
M12	6904	25-7-2013	Thu	1740	257 1 3602 91 15817	CW	(FN)
M12	8116	25-7-2013	Thu	1740	124 1 1239 77 87623	CW	(FN)
M12	10343	25-7-2013	Thu	1800	124 1 7616 114 30730	CW	(FN)
M12	9264	25-7-2013	Thu	1820	124 1 7616 114 30730	CW	(FN)
M12	8116	25-7-2013	Thu	1840	124 1 7616 114 30730	CW	(FN)
M12	9176	25-7-2013	Thu	1900	257 1 6639 70 62854	CW	(FN)
M12	9176	25-7-2013	Thu	1900	257 6639 70 62854 46573 35742 71045 07819 ... 25860 29005 84494 27557 57049 000 000	CW	(MPJ)
M12	13926	25-7-2013	Thu	1910	919 919 919 000	CW	(MPJ)
M12	7931	25-7-2013	Thu	1920	257 1 6639 70 62854	CW	(FN)
M12	6904	25-7-2013	Thu	1940	257 1 6639 70 62854	CW	(FN)
M12	14869	27-7-2013	Sat	2110	851 1 3291 121 59880 51537 03474 02074 77055 ... 47396 09600 30766 55264 39212 000 000	CW	(MPJ)
M14	10424	7-7-2013	Sun	1603	i.p. 342 342 57 57 = = 49893 22658 37358 ... 38295 23491 32158 = = 342 342 57 57 00000	CW	(JPL-RUS)
M14	6856	9-7-2013	Tue	1820	163 534 15 = = 37134 92734 01638 93277 92015 83913 02581 83913 09647 82557 73910 82945 93012 03221 72910 = = 534 15 00000	CW	(MPJ)
M14	5938	10-7-2013	Wed	1922	In progress ... 95576 11853 98234 55424 287 287 015 015 00000	CW	(MPJ)
M14	10424	13-7-2013	Sat	1600	058 (R4) 473 473 51 51 = = 73122 46755 17226 31134 83581 60945 (Cont'd) = = 473 473 51 51 00000	CW	(JPL-FNL)
M14	10756	15-7-2013	Mon	1704	975 862 51 = = 11893 54819 62807 ... 43517 18625 41886 = = 862 51 00000	CW	(JPL-FNL)
M14	10755	17-7-2013	Wed	1705	i.p. 10934 90233 94040 33863 16077 90875 = = 763 763 20 20 00000	CW	(JPL-RUS)
M14	5776	17-7-2013	Wed	1906	i.p. 29309 90753 78458 86303 52614 27346 = = 112 112 50 50 00000	CW	(JPL-RUS)
M14	9075	19-7-2013	Fri	1735	i.p. 18447 02900 91358 97848 42417 06552 62114 8159 48420 49868 80276 05594 10785 65919 93294 42599 45924 44834 67123 23934 93142 81576 43841 21290 = = 213 213 54 54 00000	CW	(JPL-RUS)
M14	5563	20-7-2013	Sat	0906	i.p. 27199 = = 623 623 15 15 00000	CW	(JPL-S)
M14	10755	21-7-2013	Sun	1703	975 408 408 51 51 = = 4417. 61754 68242 (Cont&Ed) = = 408 408 51 51 CW 00000	CW	(JPL-RUS)
M14	8047	24-7-2013	Wed	1706	i.p. 70031 12239 70867 10932 12593 73918 75019 22604 58967 01106 23372 24815 02470 26981 14421 000 000	CW	(JPL-RUS)
M14	6802	24-7-2013	Wed	1720	463 463 463 8885 95 8885 95 77957 25210 41405 96634 36577 ... 23372 24815 02470 26981 14421 000 000	CW	(JPL-RUS)
M14	6802	24-7-2013	Wed	1740	463 463 463 8885 95 8885 95 77957 25210 41405 96634 36577 ... 23372 24815 02470 26981 14421 000 000	CW	(JPL-RUS)

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M14	5939	24-7-2013	Wed	1920	417 635 15 = = 62718 72934 01729 03367 92678 02712 82399 01779 03782 91023 72910 01967 92837 46173 88247 = = 635 15 00000 //5840, 5841 kHz	CW	(MPJ)
M14	18041	25-7-2013	Thu	0507	952 952 952 730 730 60 60 40263 40263 89696 89696 30625 30625 ... 006870 05870 730 730 60 60 00000	CW	(EW)
M18	4503	18-7-2013	Thu	1908	2311 2311 2311 ...	CW	(FN)
M18	4503	18-7-2013	Thu	1908	2311 2311 2311 2311 ...	CW	(FN)
M18	4505	20-7-2013	Sat	2147	0251 0251 0251	CW	(JPL-S)
M21	5221.5	5-7-2013	Fri	2109	=99T110??T?????	CW	(VL)
M21	5356	5-7-2013	Fri	2111	=99T111??8?????	CW	(VL)
M21	6422	7-7-2013	Sun	1216	=991616??8?????	CW	(JPL-FNL)
M21	9367	7-7-2013	Sun	1245	=991646??8????? =991646??8???????	CW	(JPL-FNL)
M21	5221.5	7-7-2013	Sun	1951	Russian Air Defence =992352??0?????	CW	(MPJ)
M21	6422	9-7-2013	Tue	1059	26242901030510 =991510??8???????	CW	(JPL-FNL)
M21	5222	10-7-2013	Wed	2010	=990010??0???????(2010z)	CW	(JPL-FNL)
M21	5357	11-7-2013	Thu	0950	=16242541428452 =16243543603652 =991353??8?????	CW	(JPL-FNL)
M21	5356	13-7-2013	Sat	2146	Russian PVO =990147??8?????	CW	(MPJ)
M21	3246.5	13-7-2013	Sat	2157	Russian PVO =000157??0????? //5221.5 kHz	CW	(MPJ)
M21	9368	16-7-2013	Tue	1135	PVO =991535??8?????	CW	(JPL-FNL)
M21	6422	16-7-2013	Tue	1145	PVO. =991544??8????? =26504701040200 =16501249577644 =26501702080815	CW	(JPL-FNL)
M21	3247	16-7-2013	Tue	2318	PVO. =990319??0?????	CW	(JPL-FNL)
M21	9367.5	31-7-2013	Wed	0650	Russian Air Defense. =991053??8????? =991054??8????? =216236543386852 =26236901????12 =991055??8????? =162365433864 =26236901??0612 =1623554399554 =26235601030502 =991056??8????? = 169675439900 = 2686770110100 = 2013-07-31 (wp3)	CW	(WP3)
M22	4595	1-7-2013	Mon	0110	4XZá	CW	(LG2)
M22	10322	19-7-2013	Fri	2110	4XZ IDF/Israeli Navy Haifa ISRÁ5Fgs	CW	(LG2)
M22	6610	22-7-2013	Mon	2000	idling first than op message	CW	(AleTau)
M22	6379	22-7-2013	Mon	2000	tpdjw = nr176	CW	(AleTau)
M22	6607	30-7-2013	Tue	0245	4XZ: Navy Haifa ISR "VVV DE 4XZ 4XZ //"	CW	(PPA)
M23	10249	11-7-2013	Thu	1957	747 (R18)	CW	(JPL-FNL)
M23	10249	20-7-2013	Sat	1957	222 (R18)	CW	(JPL-RUS)
M23	12170	23-7-2013	Tue	2105	888 (R 13)	CW	(FMB)
M32	5596	24-6-2013		1926	Russian Mil: GDVI	CW	(BCI)
M32	5104	25-6-2013		1930	Russian Mil: AD5N	CW	(BCI)
M32	6804	27-6-2013		2101	Russian Mil: 5USA wkg P4L5	CW	(BCI)
M32	9134	28-6-2013		0643	Russian Mil: MTD9)	CW	(BCI)
M32	4419	30-6-2013		2101	Russian Mil: M33L	CW	(BCI)
M32	5421	1-7-2013	Mon	0049	Russian Mil. 5LGsá	CW ááá	(LG2)
M32	5795	1-7-2013	Mon	2016	Russian Mil. L92U DE LA8Z. LA8Z ZSU ZWH ZFI ZWD ZWW ZFG QRR3 K	CW	(Topol)
M32	5792	1-7-2013	Mon	2045	Russian Mil. ... ??937 76001 35402 84060 46339 03794 84382 02030 549 K	CW	(Topol)
M32	5796	1-7-2013	Mon	2051	Russian Mil. LA8Z OK ZVZ ZJH ZBS QRR3	CW	(Topol)
M32	7632	5-7-2013	Fri	0407	Russian Mil: 2OJD wkg THP9	CW	(BCI)
M32	8077	5-7-2013	Fri	1140	i.p. K. XXX XXX (into T600 mode) RDL 32041 9373. 32041 93738 32041 CW 93738 K (into T600 mode)	CW	(JPL-FNL)
M32	8024	7-7-2013	Sun	1012	ABOY K. THP9 K. NGVVI EEEE NGVI K	CW	(JPL-FNL)
M32	6822	7-7-2013	Sun	1018	VVV GMJX DE Q1ZZ K. WENI DE Q1ZZ K. T83Q DE Q1ZZ K	CW	(JPL-FNL)
M32	6424	7-7-2013	Sun	1201	RJD99 DE RDO88 QSA ? QTC K. RDO88 584 22 07 1601 584 = FOR RJD99 = 645.2 022.. 09939 98429 39762 48139 77934 (Cont&Ed)	CW	(JPL-FNL)
M32	11593	7-7-2013	Sun	1201	3GI4 DE 6OLF K	CW	(JPL-FNL)
M32	10435	7-7-2013	Sun	1237	342 K. FA8M 780 29 6 .635 780 = ZKW 444 = 0816 8387 9991 ... (see N&O 190)	CW	(JPL-FNL)
M32	6340	7-7-2013	Sun	1245	VVV RJD99 DE RJU49 QSA ? QTC K	CW	(JPL-FNL)
M32	10988	7-7-2013	Sun	1245	JTMG DE Y8XK K. X9EG DE Y8XK K. X9EG DE Y8XK K	CW	(JPL-FNL)
M32	7958	7-7-2013	Sun	1258	B5JO QTC ZGL AR. 64ZL 352 16 6 1704 352 = ZGL 444 = 6RST PPPPP APSFV (Cont&Ed)	CW	(JPL-FNL)
M32	9192	7-7-2013	Sun	1449	QTC K. 2MKA 985 22 7 1848 985 = .4 = MMMMM IVDPH WSPTA EH... (Cont&Ed)	CW	(JPL-FNL)
M32	7965	7-7-2013	Sun	1454	RMI6 DE RJC66 QYT 4 QSA 4 QYT 4 QSA ? K. RJC66 R K	CW	(JPL-FNL)
M32	7957	7-7-2013	Sun	1506	B4ZL = B4ZL 890 .8 7 1902 890 K. B4ZL ZFI 074 K. B4ZL = PPPPP DETSS PZCDW (Cont&Ed) B4ZL PUPÆAE 523. B4ZL = PUPÆAE 523 RPT AL K.	CW	(JPL-FNL)

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M32	10987	7-7-2013	Sun	1958	RPT K Russian Military de Y8YK K. Nothing further.	CW	(MPJ)
M32	4612	7-7-2013	Sun	2000	VVVV Y8SD Y8SD Y8SD K. Y8SD R QSA 1/? K (see N&O 190)	CW	(JPL-FNL)
M32	4810	9-7-2013	Tue	0945	XXX XXX RMU51 47297 KOKOSHKA 5107 6367 K	CW	(Gwr)
M32	7931	9-7-2013	Tue	1059	XN6R de ODWP K. R K. PAIW DE ODWP K. R K. BBCO DE ODWP K. QSA CW NO QSV K. BK. BBCO DE ODWP K. R K. PYSI DE ODWP K. RPT K. PYSI DE ODWP K. SK. BBCO DE ODWP K. R K	CW	(JPL-FNL)
M32	6473	9-7-2013	Tue	1102	QTC ZZL K. J4WY 310 20 8 1500 310 = ZDL 41 = FVXGY KLPÆOÆH æHOKHL CINHP (ContÆd)	CW	(JPL-FNL)
M32	5761	9-7-2013	Tue	1113	BK. QSV K. QRJ 4 R K. I7GH DE 4OG1 K. QRJ ? K. R K KL.. DE 4OG1 K. KL5H DE 4OG1 K. KL5S DE 4OG1 K	CW	(JPL-FNL)
M32	10543	9-7-2013	Tue	1254	DE RCV QTC 315 40 8 152. 315 = PRIP PETERBURG ... 27. BP (ContÆd)	CW	(JPL-RUS)
M32	7632	9-7-2013	Tue	1300	.GVI DE 2OJD K. 9I. DE 2OJD K. R K ABO. DE 2OJD K. R KT... DE 2OJD K. R K	CW	(JPL-RUS)
M32	3316	10-7-2013	Wed	1625	8XDQ DE MZ05 K. R K. H95B DE MZ05 K. H95B DE MZ05 K. H95B DE MZ05 K	CW	(JPL-FNL)
M32	3283	10-7-2013	Wed	1625	Q1VM clg OA5M, METM, EDTZ, KPGB, NMZW, 57LT, PPDZ, WSXU, ALHD, R K	CW	(JPL-FNL)
M32	5477	10-7-2013	Wed	2003	SAAW DE TVNO K	CW	(JPL-FNL)
M32	5393	11-7-2013	Thu	0950	Russian Mil. V2KE DE CBW5 K	CW	(JPL-FNL)
M32	7818	11-7-2013	Thu	0959	XXX GIWEGI 41743 ZAMORYH 01483764 K	CW	(JPL-FNL)
M32	4617	11-7-2013	Thu	1150	111 K. RPT K. 1 EEEE 4T7P DE 1UQ8 OK QBE QY. 4 K. RPT K. 1UQ8 OK QBE QYT 4 K	CW	(JPL-FNL)
M32	9152	11-7-2013	Thu	1638	NSK3 RPT K. K7PZ DE NSK3 K. NSK3 QSA ? K. NSK3 R K	CW	(JPL-FNL)
M32	18.1	12-7-2013	Fri	1448	XXX RDL 22222 43540 52883 25066 24066 ... 45804 12041 K (41 groups)	CW	(MPJ)
M32	6846	13-7-2013	Sat	2117	AVLO: Russian Military msg to J414: AVLO 0104 888 = 852 = ITKRN PPPPP PAWCY PASMG ORGET ... OLchQD SÍUK■ PAWCY PASMG -RPW- 053 RPT AL K. J414 reads back message on QSX freq 5879 kHz	CW	(MPJ)
M32	6846	13-7-2013	Sat	2124	AVLO: Russian Military. Comms check with 4UMY 6GSA LDQ2 & GSZ6, CW all of whom respond on QSX freq 5879 kHz.	CW	(MPJ)
M32	5879	13-7-2013	Sat	2125	4UMY: Russian Military. QSX freq to 6846 kHz. 5 Stations.	CW	(MPJ)
M32	4778	16-7-2013	Tue	0009	??? DE ZTK6	CW	(Topol)
M32	7876	16-7-2013	Tue	1138	ENJB DE RT-K K	CW	(JPL-FNL)
M32	6822	16-7-2013	Tue	1200	XXX MDVB MDVB 264 7GERUNOK XXX XXX MDVB MDVB 2647 GERU- NOK K	CW	(JPL-FNL)
M32	5596	16-7-2013	Tue	2301	KJGN DE SZSC K. JGZV DE SZSC K. QSA 3 QSA ? K. R K. WATV DE SZSC K. QSA 2 QSA ? K. R K	CW	(JPL-FNL)
M32	11116	17-7-2013	Wed	1030	XXX LR43 LR43 TEHNIAŒSKAÆA PROWERKA 540 K. 14 E	CW	(JPL-RUS)
M32	3315	17-7-2013	Wed	1918	CYZG DE XCMS K. R K. 3NWA DE XCMS K	CW	(JPL-RUS)
M32	3282	17-7-2013	Wed	1921	R K. HU6J DE KCDW K. R K. BIYE DE KCDW K. D7ML DE KCDW K. R K. KMEL DE KCDW K. R K	CW	(JPL-RUS)
M32	3274	17-7-2013	Wed	1931	INH9 DE YEM5 K. R K	CW	(JPL-RUS)
M32	5792	17-7-2013	Wed	2042	i.p. ZLS 763 = 92610 14351 41106 09806 17965 ... 21072 52011 41128 CW 49287 18380 059 K	CW	(MPJ)
M32	4419	18-7-2013	Thu	0001	XI7Y clg 2RDS, V47M, SKKR, IPY5, GMOR DE XI7Y K. R K	CW	(JPL-RUS)
M32	4835	22-7-2013	Mon	1209	XXX XXX ShchMCK ShchMCK 78714 BOLEIT 0574 3883 K	CW	(Gwr)
M32	4770	22-7-2013	Mon	1247	Tentative Russian Mil. UAA UAA UAA 09740 09740 rpt	CW	(Gwr)
M32	4770	22-7-2013	Mon	1249	Tentative Russian Mil. UAA UAA UAA 02600 02600 rpt	CW	(Gwr)
M32	4770	22-7-2013	Mon	1252	Tentative Russian Mil. UAA UAA UAA 02190 02190 rpt. UAA UAA UAA CW 00036 00036 rpt. UAA UAA UAA QSY BK QSL1 NIL SK UAA UAA UAA SK	CW	(Gwr)
M32	5881	23-7-2013	Tue	0500	XXX XXX RCD95 RCD95 RJI55 RJI55 83458 DETURID 4032 4054 K	CW	(Gwr)
M32	4900	23-7-2013	Tue	2001	Russian Mil: 8P46 K. Nothing further. Prob a QSX frequency	CW	(MPJ)
M32	5881	24-7-2013	Wed	0940	XXX XXX REO REO 68740 DIEZNYJ 4580 3839 K / ??? ??? ??? ??? 68740 ??????? 4580 3839 ?	CW	(argonn)
M32	7911	24-7-2013	Wed	1001	KPXT ZXZ GZG ZAZ QT 4 K. KPXT R K	CW	(JPL-RUS)
M32	7957	25-7-2013	Thu	0239	E1P4 QYD? K. 7GAF DE E1P4 QYD? K. 7GAF DE E1P4 QCZ. 7GAF DE E1P4 QYD? K	CW	(JPL-RUS)
M32	8428	26-7-2013	Fri	1020	EDDZ DE HL1F K. BGI2 DE HL1F K. D7C3 DE HL1F K. ZPSW DE HL1F K.	CW	(JPL-S)
M32	10987	26-7-2013	Fri	1856	9AZD 435 19 26 2248 435 = ZLS 579 = PPPPP LRDSA BQDRO (ContÆd)	CW	(JPL-S)
M32	3347	26-7-2013	Fri	1905	PCVN DE IHMP K. ZXT ZMQ ZKV ZRM ZAQ ZAZ K. R K	CW	(JPL-S)
M32	18.1	28-7-2013	Sun	1311	Russian Mil Strat Bcast. RDL 70887 09401 70887 09401 70887 09401 K.	CW	(MPJ)
M32	18.1	28-7-2013	Sun	1521	Russian Mil Strat Bcast. RDL 22222 57989 69883 ... 80427 98883	CW	(MPJ)

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					28092 K		
M32	5412	28-7-2013	Sun	2037	Possibly Russian Mil. Hand keyed. Weird message. YuH GCH AZFX JKPR S D U U ChHHG CChBPPM CHS I JFJSh YBM T I KNNI BFIB O X	CW	(AB)
M32	3772	30-7-2013	Tue	0143	XXX XXX PABA PABA KORWET375 KORWET375	CW	(Topol)
M32	7959.5	31-7-2013	Wed	0043	XXX XXX JUE4 MJSR 443 75 ARENAK 1452 2832. XXX XXX JUE4 MJSR 711 65 ??ÄHTENXE 2934 7252	CW	(Topol)
M32a	8345	1-7-2013	Mon	0005	Russian Navy. VVV RCV DE RCJG QSA? QTC	CW	(Topol)
M32a	8345	3-7-2013	Wed	0005	Russian Navy. VVV RCV DE RMYZ QSA QTC? VVV RCV DE RBIZ QSA? QTC. VVV RCV DE RKB91 QSA? QTC (see N&O 190)	CW	(Topol)
M32a	8345	3-7-2013	Wed	0602	RCJG: Russian Navy AO Ivan Bubnov. rcv de rcjg 189 18 41000 189 = sml for rjh45 rje73 = 04061 99397 10257 41598 00205 10240 40107 54000 70200 80000 22252 00220 20000 88000 04014 = + rcjg k	CW	(WP3)
M32a	8345	3-7-2013	Wed	0608	Russian Navy. RMYZ 624 18 3 1002 624 = SML FOR RJE73 Rjh45 = 03121 99423 10298 22252	CW	(Topol)
M32a	8345	3-7-2013	Wed	1725	Russian Navy. VVV RMP DE RFK99 QSA? RMP DE RFK99 QSA2 QYT4 QSA? (see N&O 190)	CW	(Topol)
M32a	8345	3-7-2013	Wed	1805	RBIZ: Russian Navy PM-138. rcv de rbiz 255 17 3 2200 255 = for rje73 rjh45 = 0181 99349 10358 41597 42303 10259 40077 56000 70300 84210 22200 10268 20000 88000 03014 = + rbiz k	CW	(WP3)
M32a	8345	3-7-2013	Wed	1810	RCJG: Russian Navy AO Ivan Bubnov. rcv de rcjg 389 18 3 2201 389 = sml for rjh45 rje73 = 03181 99407 10279 41998 23203 10260 40127 54000 70200 82100 22252 00220 20000 88000 03014 = + rcjg k	CW	(WP3)
M32a	8345	3-7-2013	Wed	1832	RCJG: Russian Navy AO Ivan Bubnov. rcv de rcjg 931 3 3 2228 931 = 82530 32210 03002 = rcjg k	CW	(WP3)
M32a	8345	3-7-2013	Wed	2013	Russian Navy. RCV DE RCJG QSA QTC? RCJG 457 3 3 0010 457 = 58250 CW 22345 03002 = AR RCJG	CW	(Topol)
M32a	12464	4-7-2013	Thu	0550	RJP32: Russian Navy. rcv de rjp32 qrj2 qrv k	CW	(WP3)
M32a	12464	4-7-2013	Thu	0607	RKB91: Russian Navy AO Kola. riw de rkb91 531 16 4 1000 531 = sml for rjh45 rje73 = 04061 99359 10148 41898 12703 10250 40160 51001 70200 8/// 22200 00200 04012 = + rkb91 k	CW	(WP3)
M32a	12464	4-7-2013	Thu	1803	RKB91: Russian Navy AO Kola. riw de rkb91 346 16 3 2200 346 = sml for rjh45 rje73 = 03181 99359 10148 41898 12703 10300 40160 51010 70202 8/// 00000 00230 03012 = + rkb91 k	CW	(WP3)
M32a	12464	5-7-2013	Fri	1214	Russian Navy. Period 1214-1806 UTC. See N&O 190 for the transcripts	CW	(Topol)
M32a	8345	6-7-2013	Sat	0001	Russian Navy. Period 0001-0127 UTC. See N&O 190 for the transcripts	CW	(Topol)
M32a	10544	6-7-2013	Sat	1235	Russian Navy. RTT22 de RCV QSA ? QTC K	CW	(JPL-FNL)
M32a	8345	6-7-2013	Sat	1802	Russian Navy AO Ivan Bubnov. rcv de rcjg 592 18 6 2200 592 = sml for rjh45 rje73 = 06181 99362 10218 41998 03004 10260 40108 54000 70200 80000 22253 00240 20000 88000 06014 = + rcjg k	CW	(WP3)
M32a	12464	6-7-2013	Sat	1805	Russian Navy AO Kola. riw de rkb91 765 16 6 2200 765 = sml for rjh45 rje73 = 06181 99361 10228 41898 22703 10320 40130 51010 70200 8/// 22200 00220 06012 = + rkb91	CW	(WP3)
M32a	8345	6-7-2013	Sat	1806	Russian navy tug MB-304. rcv de rmyz 799 18 6 2202 799 = sml for rje73 rjh45 = 06181 99362 10171 41999 02960 10240 40150 54000 70000 80000 22262 00250 299// 399// 06014 = + rmyz k	CW	(WP3)
M32a	8345	6-7-2013	Sat	1807	Russian Navy PM-138. rcv de rbiz 524 17 6 2200 524 = for rje73 rjh45 = 06181 99349 10358 41597 42303 10255 40098 52010 70200 84100 22200 10270 20000 88000 06014 = + rbiz k	CW	(WP3)
M32a	8345	7-7-2013	Sun	0002	Russian Navy. Period 0002-0215 UTC. See N&O 190 for the transcripts	CW	(Topol)
M32a	10544	7-7-2013	Sun	1245	RGX94 DE RCV QTC 982 61 6 1420 982 = NAWIP 036 1437 KARTY 31035 31036 (see N&O 190)	CW	(JPL-FNL)
M32a	8345	7-7-2013	Sun	1801	Russian Navy PM-138. rbiz 46622 ditrazin 9552 2400 k	CW	(WP3)
M32a	8345	7-7-2013	Sun	1801	Russian Navy AO Ivan Bubnov. rcjg 46622 ditrazin 9552 2400 k	CW	(WP3)
M32a	8345	7-7-2013	Sun	1802	Russian navy tug MB-304. rmyz 46622 ditrazin 9552 2400 k	CW	(WP3)
M32a	8345	7-7-2013	Sun	1802	Russian Navy CG Moskva. rjt22 46622 ditrazin 9552 2400 k	CW	(WP3)
M32a	12464	7-7-2013	Sun	1804	Russian Navy AO Kola. riw de rkb91 478 16 7 2200 478 = sml for rjh45 rje73 = 07181 99360 10228 41898 13203 10350 40150 51010 70200 8/// 22200 00220 07012 = + rkb91 k	CW	(WP3)
M32a	8345	7-7-2013	Sun	1809	Russian navy tug MB-304. rcv de rmyz 346 18 7 2202 346 = sml for rje73 rjh45 = 07181 99368 10132 41999 02770 10240 40170 57020 70000 80000 22263 00240 299// 399// 07014 = + rmyz k	CW	(WP3)
M32a	8345	7-7-2013	Sun	1812	Russian Navy PM-138. rcv de rbiz 786 17 7 2200 786 = for rje73 rjh45 = 07181 99349 10358 41597 22302 10256 41119 52006 70200 82110 22200 10275 20000 88000 07014 = + rbiz k	CW	(WP3)
M32a	8345	7-7-2013	Sun	1814	Russian Navy AO Ivan Bubnov. rcv de rcjg 234 18 7 2200 234 = sml for rjh45 rje73 = 07181 99362 10152 41998 02602 10270 40148 54000 70200 80000 22263 00240 20000 88000 07014 = + rcjg k	CW	(WP3)
M32a	9281	9-7-2013	Tue	0350	RJE56 calling RJD52 20130709	CW	(RPr)

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M32a	9344	9-7-2013	Tue	0453	RFX56 (ADMIRAL PANTELEYEV) calling RCV 20130709	CW	(RPr)
M32a	8345	9-7-2013	Tue	0605	Russian Navy AO Ivan Bubnov. rcv de rcjg 793 18 9 1000 793 = sml for rjh45 rje73 = 09061 99374 10058 41498 20705 10240 40158 57010 70200 82400 22263 00240 20000 88000 09014 = + rcjg k	CW	(WP3)
M32a	12464	9-7-2013	Tue	0607	Russian Navy AO Kola. riw de rkb91 592 16 9 1000 592 = sml for rjh45 rje73 = 09061 99360 10228 41898 13204 10280 40150 51010 70200 8/// 22200 09230 09012 = + rkb91 k	CW	(WP3)
M32a	8345	9-7-2013	Tue	0615	Russian navy tug MB-304. rcv de rmyz 437 18 9 1002 437 = sml for rje73 rjh45 = 09061 99370 10120 41998 03405 10240 40190 57010 70200 80000 22232 00240 299// 399// 09014 = + rmyz k	CW	(WP3)
M32a	12464	9-7-2013	Tue	0844	Russian Navy. rmp de rmrv qsa1 k	CW	(WP3)
M32a	8345	9-7-2013	Tue	0857	Russian Navy. rmp de rfh61 721 18 9 1241 721 = sml for rif4 rjd38 rjh45 = 09091 99555 10108 41598 22703 10160 40250 57010 70202 81500 22272 00170 20000 09013 = + rfh61 k	CW	(WP3)
M32a	12464	9-7-2013	Tue	0904	Russian Navy CG Moskva. rcv de rjt22 ok qyt4 qsx 9500/8678 qwh 8330/12398 fm raa k	CW	(WP3)
M32a	9500	9-7-2013	Tue	0908	Russian Navy HQ Moscow. AT-3401 tfc to rjt22 after coord on 12464	CW	(WP3)
M32a	8678	9-7-2013	Tue	0908	Russian Navy HQ Moscow. AT-3401 tfc to rjt22 after coord on 12464	CW	(WP3)
M32a	12158	9-7-2013	Tue	1154	XXX XXX RGT77 RGT77 73846 ODNOVENEC 7150 8378 K 20130708	CW	(RPr)
M32a	12464	9-7-2013	Tue	1253	RJT22 (MOSKVA) calling RCV 20130708	CW	(RPr)
M32a	4118	9-7-2013	Tue	1254	DE RFH61 QSA ? QTC K. RFS6A 142 17 9 0012 142 = SML FOR RIF4 RJD38 RJH45 = 09211 99547 10126 41698 22503 10180 40270 (Cont&Ed)	CW	(JPL-FNL)
M32a	11000	9-7-2013	Tue	1254	/9733 K. RJT22 DE RIW K. RIW QYT 4 QSA ? K. RIW R K. RJT22 DE RIW K	CW	(JPL-HK)
M32a	12464	9-7-2013	Tue	1400	RKB91 (KOLA) calling RCV 20130708	CW	(RPr)
M32a	11000	9-7-2013	Tue	1500	Russian Navy HQ Moscow. RJT22 DE RIW K RIW QYT4 IIII RI-WOKQYT4QWH 11727/ 9733K áá	CW	(LG2)
M32a	12464	9-7-2013	Tue	1617	RJT22 (MOSKVA) calling RIW 20130708	CW	(RPr)
M32a	8345	9-7-2013	Tue	1737	RJT22 (MOSKVA) calling RIW 20130708	CW	(RPr)
M32a	8345	9-7-2013	Tue	1737	RCV calling RCJG (IVAN BUBNOV) 20130708	CW	(RPr)
M32a	8345	9-7-2013	Tue	1801	Russian Navy (see N&O 190)	CW	(Topol)
M32a	9145	9-7-2013	Tue	1919	RIW calling RJT22 (MOSKVA) 20130708	CW	(RPr)
M32a	8345	10-7-2013	Wed	0002	Russian Navy (see N&O 190)	CW	(Topol)
M32a	8345	10-7-2013	Wed	1152	Russian Navy (see N&O 190)	CW	(Topol)
M32a	6832	10-7-2013	Wed	1625	REO DE RMP QTC 728 117 10 1955 728 = SML PROGNOZ POGODY S 18 (Cont&Ed with weather forecast)	CW	(JPL-FNL)
M32a	3182	10-7-2013	Wed	2126	RJP34 DE RMP QRR 3 QDW 5086 AR	CW	(JPL-FNL)
M32a	11000	11-7-2013	Thu	0156	VVV RGV82 DE RIW QSA ? K	CW	(JPL-RUS)
M32a	8346	11-7-2013	Thu	1051	RMP DE RFH61 QYT 9 QSA ? K. RFH61 OK AS 2 K	CW	(JPL-FNL)
M32a	6572	11-7-2013	Thu	1243	DE 8WPW K. SPN4 DE 8WPW K. QSA 1 QSA ? K. R K	CW	(JPL-FNL)
M32a	4080	11-7-2013	Thu	2024	96398 51397 47732 67512 05218 09417 58747 26356 65.22 23274 28458 11015 = RKZ DE RMP QTC 715 17 11 2323 715 = FM RJ.69 = 22222 42430 01	CW	(JPL-FNL)
M32a	10544	11-7-2013	Thu	2031	RJI63 DE RCV QTC 238 44 12 0020 238 = SML = 22222 27379 5.527 06894 (Cont&Ed)	CW	(JPL-FNL)
M32a	8345	11-7-2013	Thu	2240	Russian Navy. RCV DE RIR96 QSA? (see N&O 190)	CW	(Topol)
M32a	8345	12-7-2013	Fri	0002	Russian Navy. VVV RCV DE RMYZ QSA? QTC (see N&O 190)	CW	(Topol)
M32a	8345	12-7-2013	Fri	0554	Russian Navy. rmp de rfh61 706 18 12 0950 705 = sml for rif4 rjd38 rjh45 = 12061 99525 10028 41598 80205 10140 40222 57010 70202 88900 22252 00190 20501 12013 = + rfh61 k	CW	(WP3)
M32a	8345	12-7-2013	Fri	0554	Russian Navy. rmp de rfh61 706 18 12 0950 705 = sml for rif4 rjd38 rjh45 = 12061 99525 10028 41598 80205 10140 40222 57010 70202 88900 22252 00190 20501 12013 = + rfh61 k	CW	(WP3)
M32a	8345	12-7-2013	Fri	0606	Russian navy tug MB-304. rcv de rmyz 217 18 12 1002 217 = sml for rje73 rjh45 = 12061 99367 10235 41998 03605 10240 40110 54000 70200 80000 22212 00240 20000 399// 12014 = + rmyz k)	CW	(WP3)
M32a	12464	12-7-2013	Fri	0607	Russian Navy AO Kola. riw de rkb91 343 16 12 1000 343 = sml for rjh45 rje73 = 12061 99360 10228 41898 12908 10280 40101 51000 70202 8/// 22200 00300 12012 = + rkb91 k	CW	(WP3)
M32a	8345	12-7-2013	Fri	0612	Russian Navy PM-138. rcv de rbiz 657 17 12 1000 657 = for rje73 rjh45 CW = 12061 99349 10358 41598 32306 10275 40072 52009 70100 83210 22200 20280 20000 88000 12014 = + rbiz k	CW	(WP3)
M32a	8345	12-7-2013	Fri	0615	Russian Navy CG Moskva. rcv de rjt22 qsa? k	CW	(WP3)
M32a	12464	12-7-2013	Fri	0615	Russian Navy VA Kulakov. rcv de rgr35 qyt4 qsx 11688 ok? k -	CW	(WP3)
M32a	8345	13-7-2013	Sat	0002	Russian navy. VVV RIW DE RJT22 Z? VVV RCV DE RMYZ QSA? QTC (see CW	CW	(Topol)

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N&O 190)							
M32a	8345	13-7-2013	Sat	0658	Russian Navy. VVV RMP DE RFK99 QSA? (see N&O 190)	CW	(Topol)
M32a	8345	14-7-2013	Sun	0026	Russian Navy. RCV DE RBIZ QSA? RCV DE RIR96 QSA? (see N&O 190)	CW	(Topol)
M32a	8345	15-7-2013	Mon	0001	Russian Navy. RKB91 61? 18 15 0400 61? = ??? ??? RJH45 = 15001 99398 10256 222?? (see N&O 190)	CW	(Topol)
M32a	8345	15-7-2013	Mon	0007	Russian Navy. RKB91 61? 18 15 0400 61? = ??? ??? RJH45 = 15001 99398 10256 222?? (see N&O 190)	CW	(Topol)
M32a	8345	15-7-2013	Mon	0510	Russian Navy. rmp de rfh61 288 18 15 0910 288 = sml for rjh74 rjd38 rjh45 = (see N&O 190)	CW	(WP3)
M32a	12464	15-7-2013	Mon	0609	Russian Navy AO Kola. riw de rkb91 319 16 15 1000 319 = sml for rjh45 rjd38 = (see N&O 190)	CW	(WP3)
M32a	8345	16-7-2013	Tue	0001	Russian Navy. RIW DE RJT22 QRR ZSV? (see N&O 190)	CW	(Topol)
M32a	8345	16-7-2013	Tue	0604	Navy vessel RBIZ wkg RCV	CW	(BCI)
M32a	8345	16-7-2013	Tue	0633	Navy vessel RFH61 wkg RMP	CW	(BCI)
M32a	5881	16-7-2013	Tue	1801	Russian Navy. REO DE RMP QTC 813 84 16 2022 813 = ?WSEM SU- DAM DEJST (84fg message)	CW	(Topol)
M32a	17615	16-7-2013	Tue	2050	i.p. 22949 97772 81711 61473 55973	CW	(AleTau)
M32a	14556	17-7-2013	Wed	0819	Russian Navy HQ Moscow wkg GR35ásends DE RIW K GTSA QSA? Ká DE RIW QYT4 QLS K GR35 DE RIW RPT K á	CW	(LG2)
M32a	14556	17-7-2013	Wed	0833	Russian Navy HQ Moscow wkg JT22áJT22 DE RIW K EWAS 3KR35 DE RIW K EOK QYT4 QWH 692 A IIlááá	CW	(LG2)
M32a	12464	19-7-2013	Fri		RBIZ 08792 ofocioznyj 1902 1155 k	CW	(WP3)
M32a	8345	19-7-2013	Fri		RBIZ 66679 witalist 8657 9981 k	CW	(WP3)
M32a	8345	19-7-2013	Fri		RIR96 66679 witalist 8657 9981 k	CW	(WP3)
M32a	8345	20-7-2013	Sat	1808	Russian Navy Nikolay Filchenkov? rcv de rgz59 111 18 20 2155 111 = for rje65 716 818 = 55536 82528 73250 53614 92297 24946 30855 21538 0876955195 06210 28199 55950 36934 40375 20015 = + rgz59 k	CW	(WP3)
M32a	5226	21-7-2013	Sun	0130	54691 03702 40978 48819 93574 42710 32268 98842 38116 23.74 60831 22968 70871 55071 60329 43944 6.290 12115 54274 96309 21073 = AR. RCV K. RCV AS 3	CW	(JPL-RUS)
M32a	19201	21-7-2013	Sun	0800	RCV wkg RIW and RIP90	CW	(LG2)
M32a	17615	21-7-2013	Sun	0904	RCVáwk RFH6,RIP90,RGV82,RJI63 NAWIPS QTCááá	CW	(LG2)
M32a	11000	22-7-2013	Mon	1326	RDND DE RIW QSA? K	CW	(JPL-RUS)
M32a	8345	23-7-2013	Tue	0006	Russian Navy. VVV RIW DE RMC99 QSA? QTC (see N&O 190)	CW	(Topol)
M32a	17615	23-7-2013	Tue	0534	RCV:áBlack Sea Fleet Sevastopol. Weather reports for Tobruk Beirut and Tartus	CW	(LG2)
M32a	8345	23-7-2013	Tue	0545	Russian Navy LS Azov. rcv de rir96 400 14 23 0935 400= for rje73 rjh45 = 23061 99398 10856 41598 10307 10250 40157 32200 81000 22200 00246 23011 = + rir96 k	CW	(WP3)
M32a	12464	23-7-2013	Tue	0553	Russian Navy Perekop. rcv de rfh61 376 18 23 0950 376 = sml for rje73 rjd38 rjh45 = 23061 99349 10227 41997 10404 10260 40090 54000 70200 81500 22222 00260 20000 23013 = + rfh61 k	CW	(WP3)
M32a	8345	23-7-2013	Tue	0605	Russian Navy PM-138. rcv de rbiz 208 17 23 1000 208 = for rje73 rjh45 CW = 23061 99349 10358 41598 32306 10165 30039 58002 70100 83110 22200 10282 20000 88000 23014 = + rbiz k	CW	(WP3)
M32a	12464	23-7-2013	Tue	0606	Russian Navy. r.. de rmc99 421 15 23 1000 421 = sml for rjh45 rjd38 rje73 = 23061 99367 10133 41/97 40000 10280 40110 54010 70200 8/// 22263 00230 23012 = + rmc99 k	CW	(WP3)
M32a	8345	25-7-2013	Thu	0027	RCV DE RHN85 QSA 2 QYT 4 QWH 10492 K. RHN85 RPT K. RCV DE RMC99 K. RMC99 QSL 644 K	CW	(JPL-RUS)
M32a	4357	25-7-2013	Thu	0041	99900 23150 20069 58460 73004 10184 20102 70311 87800 = REA4 K CW (CW	(JPL-S)
M32a	4360	25-7-2013	Thu	0044	RIT R K	CW	(JPL-S)
M32a	11000	25-7-2013	Thu	0227	RNH61 DE RIW K. RIW R K. RJT22 DE RIW K. RIW QRR 3 QAH 8280 QSX CW 14451 K. RIW QRR 3 QWH 8280 QSX 14451 K. RIW R K	CW	(JPL-RUS)
M32a	9145	25-7-2013	Thu	0234	9733 K. RJT22 DE RIW K. RIW R K	CW	(JPL-RUS)
M32a	9145	26-7-2013	Fri	1030	RHL80 DE RIW K	CW	(JPL-S)
M32a	11000	26-7-2013	Fri	2133	RHL80 DE RIW QSA? K	CW	(JPL-RUS)
M32a	12464	29-7-2013	Mon	0503	Russian Navy. RIW DE RHL80 QSA3. RHL80 R. RHL80 QYT4 QSA1 (see N&O 190)	CW	(Topol)
M32a	3772	29-7-2013	Mon	2338	IZ5V DE SMKK QTC. SMKK 975 63 30 0235 975 = 636 085 241 = AAAAAA JKHT■ TchXUV YAEW-	CW	(Topol)
M32a	14664	30-7-2013	Tue	1226	RDL: Navy Murmansk: RDL RDL 43396 55886	CW	(PPA)
M32a	8345	31-7-2013	Wed	0006	Russian Navy. VVV RCV DE RBIZ QSA? QTC. VVV RIW DE RMC99 QSA? QTC (see N&O 190)	CW	(Topol)

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M32a	8345	31-7-2013	Wed	0537	Russian Navy. riw de rmc99 for rmp nr 543 qqx k	CW	(WP3)
M32a	12464	31-7-2013	Wed	0620	Russian Navy. riw de rmc99 327 17 31 1005 327 = sml for rjh45 rjh74 rjs38 = 31061 99348 70199 41/98 62803 10220 40170 57015 70222 8/// 22200 00210 31012 = + rmc99 k	CW	(WP3)
M32a	14556	31-7-2013	Wed	0801	Russian Navy. VVV RHL80 DE RIW QSA? RMC99 DE RIW QSA2 QRV	CW	(Topol)
M32a	8345	31-7-2013	Wed	0805	Russian Navy. (RIW DE) RMC99 113 80 31 1200 113 = SML FOR RIT RMP RCV = 11111 15038 (see N&O 190)	CW	(Topol)
M32a	12464	31-7-2013	Wed	0827	Russian Navy. rcv de rfe70	CW	(WP3)
M32a	12464	31-7-2013	Wed	0827	Russian Navy tug MB-304. rcv de rmyz ok qap k	CW	(WP3)
M32a	12464	31-7-2013	Wed	0840	Russian Navy. rcv de rld96 qsa? k	CW	(WP3)
M32a	14556	31-7-2013	Wed	0910	Russian Navy. RIW COL COR 23 14070 K. VVV RHL80 DE RIW QSA? (see N&O 190)	CW	(Topol)
M32a	16240	31-7-2013	Wed	0933	RJE56: Navy Moscow. duplex contact ;RLD69 DE RJE56 ZZD3 TRIDEW.TXT RIZN.?	CW	(PPA)
M32a	14556	31-7-2013	Wed	0938	RIW: Navy HQ Moscow QSX 12464 in contact with RHL80	CW	(PPA)
M32a	12464	31-7-2013	Wed	1221	RHL80: Russian navy ship, QSX 14556 in contact with RIW	CW	(PPA)
M32a	8345	31-7-2013	Wed	1714	Russian Navy. rit de rqce	CW	(WP3)
M32b	8816	6-7-2013	Sat	0709	Russian Naval Air Transport. rjf94 rcb de 26004 qth 5933 2310 qtr 0710 qah 5500 qbd 0300 k - qth 5700 1955 qtr 0810 qah 5600 qal XMKK 0850 qbd 0300 k - qqm XMKK 0847 sk	CW	(WP3)
M32b	8816	12-7-2013	Fri	1000	Russian Naval Air Transport. rjf94 rjc38 de 10494 qqm XUMO 0955 sk	CW	(WP3)
M32b	8816	12-7-2013	Fri	1343	Russian Naval Air Transport. rjf94 rjc38 de 10494 qto 1333 qrd UMKK CW XUMO qre 1700 qbd 1000 (?) k - qth 5831 3445 qtr 1433 qbg 5300 k - qth 5947 2446 qtr 1535 qbg 7300 k - qth 5608 2004 qtr 1632 qbg 7300 qbd 7400 k - qqm UMKK 1656 sk	CW	(WP3)
M32b	8816	15-7-2013	Mon	0719	Russian Naval Air Transport. rjf94 rjc38 de 10494 qth 6456 3429 qtr 0717 qbg 7000 k - qth 6032 3727 qtr 0818 qbg 7000 k - qay UUEE 0917 qbf 3900 qbd 1350 k - qqm XUMO 0938 sk	CW	(WP3)
M32b	8816	15-7-2013	Mon	0853	Russian Naval Air Transport. rjf94 rcb de 63182 qto 0820 qrd XLLP XMKK qre 1110 qah 5800 qbd 4000 k - qth 5914 2157 qtr 0945 qal XLLP 1058 qah 5800 qbd 3000 k - qqm XLLP 1105 sk	CW	(WP3)
M32b	8816	15-7-2013	Mon	1734	Russian Naval Air Transport. rjf94 rjc38 de 75108 qql ULAA 1712 qbd 13000 qbg 7300 k	CW	(WP3)
M32c	7942	24-6-2013		2101	Russian AF: XXX XXX REA4 REA4 79973 RANTUS 740 MW388 K	CW	(BCI)
M32c	8895	3-7-2013	Wed	0320	"W" Markers	CW	(Tom)
M32c	8895	3-7-2013	Wed	0320	Russian AF. "W" markers	CW	(Tom)
M32c	8895	3-7-2013	Wed	0620	Russian AF. "W" markers	CW	(Tom)
M32c	8895	3-7-2013	Wed	0640	Russian AF. "W" markers	CW	(Tom)
M32c	8895	3-7-2013	Wed	0700	Russian AF. "W" markers	CW	(Tom)
M32c	9842	9-7-2013	Tue	2043	Russian Air Force HQ Moscow. 2 10 330 20 156 70 1O284130 = REA4 K	CW	(LG2)
M32c	4835	12-7-2013	Fri	1039	REA4 REA4 = 12100 99900 11140 20069 50000 10244 20134 70102 15530 93911 = REA4 RPT AL QLN K	CW	(Gwr)
M32c	4835	12-7-2013	Fri	1140	REA4 REA4 = 121 *CANCEL* REA4 REA4 = 12110 99900 11140 22212 53560 63010 10124 20061 70222 87520 92111 = REA4 K	CW	(Gwr)
M32c	4835	12-7-2013	Fri	1240	REA4 REA4 = 12120 99900 11140 22212 53560 63010 10124 20061 70222 87520 92111 = REA4 K	CW	(Gwr)
M32c	4835	12-7-2013	Fri	1340	REA4 REA4 = 12130 99900 11140 22212 53560 63010 10124 20061 70222 87520 92111 = REA4 K	CW	(Gwr)
M32c	4835	12-7-2013	Fri	1440	REA4 REA4 = 12140 99900 11150 27627 64660 63206 10240 20169 70202 83530 93311 = REA4 K	CW	(Gwr)
M32c	8895	15-7-2013	Mon	0900	Russian AF. "W" marker	CW	(Tom)
M32c	8895	15-7-2013	Mon	1000	Russian AF. "W" marker	CW	(Topol)
M32c	8895	15-7-2013	Mon	1000	Russian AF. "W" marker	CW	(Topol)
M32c	4835	22-7-2013	Mon	0825	REA4 oddity. Caught only the end	CW	(Gwr)
M32c	4835	22-7-2013	Mon	0940	REA4 REA4 = 22090 99900 21130 73842 52202 10200 20176 80034 = REA4 K	CW	(Gwr)
M32c	4835	22-7-2013	Mon	1040	REA4 REA4 = 22100 99900 21130 73842 52202 10200 20176 80034 = REA4 K	CW	(Gwr)
M32c	4835	22-7-2013	Mon	1140	REA4 REA4 = 22110 99900 21130 73842 52202 10200 20176 80034 = REA4 K	CW	(Gwr)
M32c	4835	22-7-2013	Mon	1209	REA4 caught the close of a flash message, no recording or transcription.	CW	(Gwr)
M32c	4835	22-7-2013	Mon	1240	REA4 REA4 = 22120 99900 21120 62596 51697 43602 10251 20142 82134 = REA4 K	CW	(Gwr)
M32c	4835	22-7-2013	Mon	1340	REA4 REA4 = 22130 99900 21120 62596 51697 43602 10251 20142	CW	(Gwr)

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M32c	4835	22-7-2013	Mon	1440	82134 = REA4 K REA4 REA4 = 22140 99900 21130 62596 65997 40103 10242 20170 80034 = REA4 K	CW	(Gwr)
M32c	4835	22-7-2013	Mon	1540	REA4 REA4 = 22150 99900 21130 62596 65997 40103 10242 20170 80034 = REA4 K	CW	(Gwr)
M32c	4835	23-7-2013	Tue	0842	i.p. 19242 SORORAT 7957 9663 K	CW	(Gwr)
M32c	4835	23-7-2013	Tue	0942	REA4 REA4 = 23090 99900 73842 89697 81602 20224 20206 88500 = REA4 K	CW	(Gwr)
M32c	4835	23-7-2013	Tue	1240	REA4 REA4 = 23120 99900 62596 55897 63203 10210 20117 83011 = REA4 K	CW	(Gwr)
M32c	4835	23-7-2013	Tue	1340	REA4 REA4 = 23130 99900 62596 55897 63203 10210 20117 83011 = REA4 K	CW	(Gwr)
M32c	4835	23-7-2013	Tue	1440	REA4 REA4 = 23140 99900 27627 31860 23109 10270 20085 70222 52100 = REA4 K	CW	(Gwr)
M32c	4835	23-7-2013	Tue	1540	REA4 REA4 = 23150 99900 27627 31860 23102 10270 20085 70222 82100 = REA4 K	CW	(Gwr)
M32c	8895	23-7-2013	Tue	1940	Russian Air Force. W-markers	CW	(Tom)
M32c	8895	23-7-2013	Tue	2000	Russian Air Force. W-markers. Also at 2040-2042 and 2100-2102 UTC	CW	(Tom)
M32c	8895	23-7-2013	Tue	2123	Bear net. "W" markers	CW	(LG2)
M32c	4835	24-7-2013	Wed	0840	REA4 REA4 = 300 CANCEL REA4 REA4 = 24080 99900 23150 73842 92597 83001 10186 20173 88500 = REA4 K	CW	(Gwr)
M32c	4835	24-7-2013	Wed	1040	REA4 REA4 = 24100 99900 23150 73842 92597 83001 10186 20173 88500 = REA4 K	CW	(Gwr)
M32c	4835	24-7-2013	Wed	1214	REA4 4835cw caught the last couple of numbers and 'K' of an XXX flash message	CW	(Gwr)
M32c	4835	24-7-2013	Wed	1217	XXX XXX 6OKS 6OKS 02445 WOLIK 4668 8697 K	CW	(Gwr)
M32c	4835	24-7-2013	Wed	1340	REA4 REA4 = 24130 99900 23140 27627 63997 81702 10232 20158 86021 = REA4 K	CW	(Gwr)
M32c	4835	24-7-2013	Wed	1540	REA4 REA4 = 24150 99900 23140 27627 70997 82207 10200 20143 86021 = REA4 K	CW	(Gwr)
M32c	4825	25-7-2013	Thu	0940	REA4 REA4 = 25120 99900 22212 43960 20403 10184 20058 70200 82030 = REA4 K	CW	(Gwr)
M32c	4825	25-7-2013	Thu	0940	REA4 REA4 = 25090 99900 20069 68560 73201 10188 20127 70311 85210 92088 = REA4 K	CW	(Gwr)
M32c	4825	25-7-2013	Thu	1040	REA4 REA4 25100 99900 20069 68560 73101 10188 20127 70311 85210 92088 = REA4 K	CW	(Gwr)
M32c	4825	25-7-2013	Thu	1140	REA4 REA4 = 25110 99900 22212 43960 20403 10184 20058 70200 82030 = REA4 K	CW	(Gwr)
M32c	4825	25-7-2013	Thu	1440	REA4 REA4 = 25140 99900 72842 87997 40503 10195 20174 82012 = REA4 K	CW	(Gwr)
M32c	4825	25-7-2013	Thu	1540	REA4 REA4 = 25150 99900 72842 87997 40503 10195 20174 82012 = REA4 K	CW	(Gwr)
M32c	8895	25-7-2013	Thu	1800	Russian Air Force: W-markers	CW	(Tom)
M32c	8895	25-7-2013	Thu	1820	Russian Air Force: W-markers	CW	(Tom)
M32c	8895	25-7-2013	Thu	1850	Russian Air Force: Z7NG DE TV6P QSA 3 K. (TV6P) OK K	CW	(Tom)
M32c	8895	25-7-2013	Thu	1900	Russian Air Force. W-markers at 1900, 1920, 1940 UTC	CW	(Tom)
M32c	8895	25-7-2013	Thu	1954	Russian AF: Z7NG DE TV6P QSA 1 QSV K. Z7NG DE TV6P VVV VVV TV6P QRV K. TV6P R 547 ??? ??? 069 K. Z7NG DE TV6P QRV K. (TV6P) RPT K. Z7NG DE TV6P R = 474 286 812 550 K.	CW	(Tom)
M32c	8895	25-7-2013	Thu	2040	Russian AF: "W"-marker. SHNE DE TV6P. TV6P QRV. TV6P R = 883 671 CW 284 610 613	CW	(Topol)
M32c	8895	25-7-2013	Thu	2100	Russian AF: "W"-marker. FEQ6 DE TV6P. TV6P QRV. TV6P R = 989 549 500 910. "W"-marker (2120 UTC)	CW	(Topol)
M32c	8895	26-7-2013	Fri	0240	Bear Net. W-markers at 0240, 0300, 0340, 0400, 0420 UTC	CW	(Topol)
M32c	4835	29-7-2013	Mon	1044	XXX XXX REA4 REA4 19652 RUBRIKA 5720 1216 K	CW	(Gwr)
M32c	4835	29-7-2013	Mon	1540	REA4 = 29150 99900 28140 62596 58897 40104 10216 10130 82021 = REA4 K	CW	(Gwr)
M32c	8895	30-7-2013	Tue	0600	Russian AF: "W"-marker at 0600, 0620, 0640 UTC	CW	(Tom)
M32c	8895	30-7-2013	Tue	0720	Russian AF: "W"-marker followed by a short voice call. Location over the Mediterranean Sea, between Sardinia and Alger.	CW	(RP3)
M32c	8895	30-7-2013	Tue	0800	Russian AF: "W"-marker	CW	(Topol)
M32c	4835	30-7-2013	Tue	0848	REA4 REA4 = 30080 99900 20069 65560 63304 10203 20135 70302 86420 = REA4 K (see N&O 190)	CW	(Gwr)
M32c	4835	31-7-2013	Wed	0840	REA4 REA4 = 31080 99900 30140 20069 66560 60302 10218 20151 70102 83111 92777 = REA4 K	CW	(Gwr)
M42	14878	1-7-2013	Mon	0130	Russian Intel.	FSK 200/500	(MCO)

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M42	14981	1-7-2013	Mon	1145	Russian diplo. Msg on "UZR" circuit. Link id 90138.	Baudot 75/500	(LDO)
M42	14981	1-7-2013	Mon	1151	Russian diplo. 5FGs on link ID 90138	Baudot 75/500	(MCO)
M42	16150.5	1-7-2013	Mon	1629	Russian diplo	CROWD-36	(BCI)
M42	14483.5	1-7-2013	Mon	1643	Russian diplo	CROWD-36	(BCI)
M42	14543	3-7-2013	Wed	0705	Russian diplo. Two 5FG messages on the RAU circuit, link id 60070	Baudot 75/500	(LDO)
M42	12158	3-7-2013	Wed	0725	Russian diplo. Two 5FG messages on the RAU circuit, link id 60070	Baudot 75/500	(LDO)
M42	16320	4-7-2013	Thu	0150	Russian Intel. Link id 13924	FSK 200/1000	(Dan)
M42	9188	4-7-2013	Thu	0712	Russian Intel.	FSK 200/1000	(BCI)
M42	14405	4-7-2013	Thu	0719	Russian diplo	CROWD-36	(BCI)
M42	16166.5	4-7-2013	Thu	0956	Russian diplo.	CROWD-36	(LG2)
M42	11123	4-7-2013	Thu	1900	Russian Intel. 6 17	FSK 200/500	(HFD)
M42	9117	4-7-2013	Thu	1910	Russian Intel. 6 17	FSK 200/500	(HFD)
M42	6828	4-7-2013	Thu	1920	Russian Intel. 6 17	FSK 200/500	(HFD)
M42	11122	5-7-2013	Fri	0420	Russian Intel.	FSK 200/1000	(BCI)
M42	16337	7-7-2013	Sun	1132	Russian Gov. RDK RDQ QSY 11162 K. QSY 11162 K. BK QSA3 K. RPT K. OK AS K. SK. Nothing on 11162 kHz	CW	(MPJ)
M42	11424	7-7-2013	Sun	1321	Russian Gov. K4MT DE NT9P K. QTC ZZC ZV. ... K. SLD.. Switched to printer Ú sending RYs	CW	(JPL-FNL)
M42	18651	7-7-2013	Sun	1530	Russian Intel. Id 20501. 39312 00000 00000 04037 21447 34669 00893 16327	FSK 200/1000	(IW)
M42	16336	7-7-2013	Sun	1540	Russian Intel. Link id 20501 Type 07145	FSK 200/1000	(MPJ)
M42	16336	7-7-2013	Sun	1540	Russian Intel. Id 20501. 39312 00000 00000 04037 21447 34669 00893 16327	FSK 200/1000	(IW)
M42	14913	7-7-2013	Sun	1550	Russian Intel. Id 20501. 39312 00000 00000 04037 21447 34669 00893 16327	FSK 200/1000	(IW)
M42	16320	8-7-2013	Mon	0150	Russian Intel.	FSK 200/1000	(Dan)
M42	16320	9-7-2013	Tue	0150	Russian Intel.	FSK 200/1000	(Dan)
M42	20871	9-7-2013	Tue	1127	Russian Intel, Moscow	40bd 34 tone modem	(MCO)
M42	17438	9-7-2013	Tue	1355	Russian Intel.	FSK 200/1000	(BCI)
M42	15849	9-7-2013	Tue	1405	Russian Intel.	FSK 200/1000	(BCI)
M42	15931	9-7-2013	Tue	1700	Russian Intel. Message to Link 20501, Msg Nr 127. Total message size 4 blocks but only 3 decoded: 0, 1 and 2.	FSK 200/1000	(MPJ)
M42	12514	9-7-2013	Tue	1740	Russian diplo	Baudot 50/500	(MCO)
M42	12209	9-7-2013	Tue	2100	Russian Intel. Link ID 45057. Msg #007. Msg Type 07145. 4 07836 00000 00000 02052 44730 32918 00893 00233	FSK 200/1000	(MPJ)
M42	10805	9-7-2013	Tue	2120	Russian Intel. Link ID 45057. Msg #007. Msg Type 07145. 4 07836 00000 00000 02052 44730 32918 00893 00233	FSK 200/1000	(MPJ)
M42	8176	9-7-2013	Tue	2140	Russian Intel. Link ID 45057. Msg #007. Msg Type 07145. 4 07836 00000 00000 02052 44730 32918 00893 00233	FSK 200/1000	(MPJ)
M42	12051.5	10-7-2013	Wed	0638	Russian diplo	CROWD-36	(BCI)
M42	13374.5	10-7-2013	Wed	0651	Russian diplo0	CROWD-36	(BCI)
M42	16320	12-7-2013	Fri	0150	Russian Intel.	FSK 200/1000	(Dan)
M42	9067	12-7-2013	Fri	1612	Russian Intel.	FSK 200/1000	(MPJ)
M42	9067	12-7-2013	Fri	1613	Russian Intel.	FSK 200/1000	(MPJ)
M42	16336	14-7-2013	Sun	1542	Russian Intel.	FSK/200/1000	(MPJ)
M42	15931	16-7-2013	Tue	1700	Russian Intel. Link 20501. Msg 002. 00492 00000 00000 03300 36779 34796 00893 13131	FSK 200/1000	(MPJ)
M42	12209	16-7-2013	Tue	2100	Russian Intel. Link 45057. Msg 002. 50608 00000 00000 03892 44730 33628 00893 63673	FSK 200/1000	(MPJ)
M42	10805	16-7-2013	Tue	2120	Russian Intel. Link 45057. Msg 002. 50608 00000 00000 03892 44730 33628 00893 63673	FSK 200/1000	(MPJ)
M42	8176	16-7-2013	Tue	2140	Russian Intel. Link 45057. Msg 002. 50608 00000 00000 03892 44730 33628 00893 63673	FSK 200/1000	(MPJ)
M42	16320	17-7-2013	Wed	0150	Russian Intel. Link ID 31958. Msg 084. 32928 09956 37135 03095 27377 46809 26237 37827	FSK 200/1000	(Dan)
M42	16329	20-7-2013	Sat	1200	Russian Intel. 6 54	FSK 200/500	(HFD)
M42	16329	20-7-2013	Sat	1200	Russian Gov/Intel. Message repeated: 00000++++++162)5761	FSK 200/500	(MPJ)
M42	14641	20-7-2013	Sat	1210	Russian Intel. 6 54	FSK 200/500	(HFD)
M42	12187	20-7-2013	Sat	1220	Russian Intel. 6 54	FSK 200/500	(HFD)
M42	15750	21-7-2013	Sun	0909	Russian diplo	CROWD-36 áá	(LG2)
M42	18651	21-7-2013	Sun	1530	Russian Intel. Link 20501: 38052 00000 00000 00219 12857 03209 00893 18669	FSK 200/1000	(MPJ)
M42	16320	22-7-2013	Mon	0150	Russian Intel. Link ID 13366 . Msg 16384 00000 00000 01852 15371 03468 00000 14382	FSK 200/1000	(Dan)

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M42	15931	23-7-2013	Tue	1700	8 messages, Nrs 126, 127, 255/23rd all different and mostly to different link numbers.	FSK 200/1000	(MPJ)
M42	12209	23-7-2013	Tue	2000	Msgs to Link 61443-Nr 006 and Link 45057-Nr 002: Link ID 45057: 23rd of month: Msg Number 002: Msg Type 07145: 65388 00000 00000 03575 38644 35139 00893 54193.	FSK 200/1000	(MPJ)
M42	6828	25-7-2013	Thu	1918	Russian Gov/Intel. ++++++162)571 00000 ++++++	FSK 200/500	(MPJ)
M42	16320	26-7-2013	Fri	0150	Russian Intel. Link ID 13366. Msg 16384 00000 00000 01852 15363 03468 00000 14382	FSK 200/1000	(Dan)
M42	14593	28-7-2013	Sun	1112	Russian Intel. Msg Nr 057 Type 07145 on Link 36882: 29253 00310 57824 07297 43092 35534 22611 46551	FSK 200/1000	(MPJ)
M42	12206	28-7-2013	Sun	1112	Russian Intel i.p. Msg Nr 189 Type 15337 on Link 55315: 62031 00319 ... 31827 63447	FSK 200/1000	(MPJ)
M42	16336	28-7-2013	Sun	1549	Russian Intel. Link ID 20501	FSK 200/1000	(MCO)
M42	14913	28-7-2013	Sun	1551	Russian Intel. Link ID 20501	FSK 200/1000	(MCO)
M42	14913	28-7-2013	Sun	1556	Russian Intel just ending transmission	FSK 200/1000	(PPA)
M42	14539	28-7-2013	Sun	1910	Russian Intel. Msg Nr 120 Type 07145 on Link 45057: 48428 24403 09098 05767 59621 01438 49076 60376 and Nr 249 Type 08171 on Link 05405: 05405 65527 ... 65533 65529	FSK 200/1000	(MPJ)
M42	15931	30-7-2013	Tue	1600	Russian Intel. Many different Links, Msg Nrs and Types. Link 20501 Nr 002 Type 07145 seemed to be dominant.	FSK 200/1000	(MPJ)
M42	9354	31-7-2013	Wed	0650	Tent. Russian Gov.464646464646464646464646 837 110 31 0645 4321 = 83657 59722 16159 02247 51351 85251 9à..	Baudot 50/500	(WP3)
M42	9354	31-7-2013	Wed	0650	Tent. Russian Gov. rpt pbl k - qtc 1zz c k then into rtty	CW	(WP3)
M42a	10436	5-7-2013	Fri	1134	GRU HFDF net. VVVVVV NW– NW– . 28955 — 29296 – 29296 – 89905 CW K. —— K	CW	(JPL-FNL)
M42a	11485	6-7-2013	Sat	1226	GRU HFDF net. —— RPT 3. VVVVVV RPT 3 K K ? OK	CW	(JPL-FNL)
M45	5476.3	4-7-2013	Thu	1702	074 218 218 32 32 = = 43686 29905 87651 90187 66788 ... 95162 75919 96686 21447 98182 - - 218 218 32 32 000 //5475.9 kHz	CW	(MPJ)
M45	5474	9-7-2013	Tue	1702	074 probably 35 groups. Remainder uncopiable on either frequency. //5075.15	CW	(MPJ)
M45	5475.13	11-7-2013	Thu	1702	074 218 32 = = 43686 29905 87651 90187 66788 ... 95162 75919 96686 21447 09182 = = 218 32 000 //5474, 5476.26 kHz	CW	(MPJ)
M45	5075.13	16-7-2013	Tue	1702	Unreadable. // 5074 5474-both jammed. 5476.3- unreadable	CW	(MPJ)
M51	5421	1-7-2013	Mon	0422	i.p.	CW	(BCI)
M51	9213.06	19-7-2013	Fri	1944	NR 62J 22 21:47:31 1985 = VNGBK BUAWD XRGB RGB UBHFN VMHOT ... Spuri on 9215.15 kHz	CW	(MPJ)
M51	9213	19-7-2013	Fri	2130	i.p.	CW	(LG2)
M51	6853	22-7-2013	Mon	0640	coded text messages	CW	(LG2)
M51	19638.5	25-7-2013	Thu	1730	5FGs offline crypto	CW	(MCO)
M89	10640	4-7-2013	Thu	1120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	4-7-2013	Thu	1120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	3797	4-7-2013	Thu	1126	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	3330	4-7-2013	Thu	1128	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10180	4-7-2013	Thu	1226	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10998	4-7-2013	Thu	1543	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	3797	4-7-2013	Thu	1545	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	4-7-2013	Thu	1545	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3330	4-7-2013	Thu	1547	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	5230	4-7-2013	Thu	1549	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	4-7-2013	Thu	1549	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	3330	4-7-2013	Thu	2109	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	5230	4-7-2013	Thu	2111	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	4-7-2013	Thu	2111	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	3797	4-7-2013	Thu	2113	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	6840	4-7-2013	Thu	2120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	4860	4-7-2013	Thu	2120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	5230	4-7-2013	Thu	2229	DKG6 de 3A7D	CW	(VL)
M89	5588	5-7-2013	Fri	1125	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	3330	5-7-2013	Fri	1506	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	3797	5-7-2013	Fri	1508	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	5-7-2013	Fri	1508	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	7602	5-7-2013	Fri	1510	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	5-7-2013	Fri	1510	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	4860	5-7-2013	Fri	1520	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)

Code	Freq.	date	day	UTC	remarks	mode	contributor
M89	6840	5-7-2013	Fri	1520	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	3330	5-7-2013	Fri	2117	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	3330	6-7-2013	Sat	1553	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	4512	6-7-2013	Sat	1554	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	7602	6-7-2013	Sat	1556	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	6-7-2013	Sat	1556	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	7767	6-7-2013	Sat	1630	In tfc: 4T34 5UN6 76. D7A. (Cont'd) III III = D6N6 .D5T TANN. T34. 3.U. CW (Cont'd) III III = .TU4 U..5. A4 UN3T U... (Cont'd)	CW	(JPL)
M89	6773	7-7-2013	Sun	0945	V H2FL (x3) DE DRV8 (x2) (Cont'd) //8040	CW	(JPL)
M89	8040	7-7-2013	Sun	0945	V H2FL (x3) DE DRV8 (x2) (Cont'd) //6773	CW	(JPL)
M89	5588	7-7-2013	Sun	0947	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	7602	7-7-2013	Sun	1601	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	3330	7-7-2013	Sun	1636	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	3642	7-7-2013	Sun	1637	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	7602	7-7-2013	Sun	1637	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	5500	7-7-2013	Sun	1639	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	7-7-2013	Sun	1639	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	3797	7-7-2013	Sun	1640	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	7-7-2013	Sun	1640	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	5801	8-7-2013	Mon	1237	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	4512	8-7-2013	Mon	1239	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	5500	8-7-2013	Mon	1241	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	8-7-2013	Mon	1241	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	3330	8-7-2013	Mon	1243	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	7602	8-7-2013	Mon	1438	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	3330	8-7-2013	Mon	1439	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	4225	8-7-2013	Mon	1441	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	5500	8-7-2013	Mon	1441	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4474	8-7-2013	Mon	1706	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	4225	8-7-2013	Mon	1708	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	5500	8-7-2013	Mon	1708	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	3330	8-7-2013	Mon	1710	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	4512	8-7-2013	Mon	1712	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	7602	8-7-2013	Mon	1713	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	5230	8-7-2013	Mon	1713	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	4860	8-7-2013	Mon	1720	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	8-7-2013	Mon	1720	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	4474	8-7-2013	Mon	2315	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	8750	8-7-2013	Mon	2316	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	6840	8-7-2013	Mon	2320	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	8-7-2013	Mon	2320	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	5500	8-7-2013	Mon	2327	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	8-7-2013	Mon	2327	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	5500	9-7-2013	Tue	1058	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	9-7-2013	Tue	1058	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	4512	9-7-2013	Tue	1500	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	7602	9-7-2013	Tue	1552	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	5500	9-7-2013	Tue	1558	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	9-7-2013	Tue	1558	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	3797	9-7-2013	Tue	1600	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	3330	9-7-2013	Tue	1602	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	7602	9-7-2013	Tue	1604	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	5230	9-7-2013	Tue	1604	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	4474	9-7-2013	Tue	2151	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10998	10-7-2013	Wed	1611	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	6840	10-7-2013	Wed	1620	VVV (x3) Q2M DE NYZ (x2) QSA ? K	CW	(JPL)
M89	5230	10-7-2013	Wed	1632	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	3330	10-7-2013	Wed	1644	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	4512	10-7-2013	Wed	1645	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	10-7-2013	Wed	1645	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	5230	10-7-2013	Wed	1647	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	10-7-2013	Wed	1647	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)

Code	Freq.	date	day	UTC	remarks	mode	contributor
M89	5555	10-7-2013	Wed	1650	In chat: EEE N6T3 7G/T2/CCK 2EEEE -Handsent- (see N&O 190)	CW	(JPL)
M89	10998	10-7-2013	Wed	1955	V RXP7 (x3) DE CZT2 (x2) (Cont'd) //4886	CW	(JPL)
M89	4886	10-7-2013	Wed	1955	V RXP7 (x3) DE CZT2 (x2) (Cont'd) //10998	CW	(JPL)
M89	5230	10-7-2013	Wed	2007	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	4474	10-7-2013	Wed	2114	V RXP7 (x3) DE CZT2 (x2) (Cont'd) //10998	CW	(JPL)
M89	10998	10-7-2013	Wed	2114	V RXP7 (x3) DE CZT2 (x2) (Cont'd) //4474	CW	(JPL)
M89	3330	10-7-2013	Wed	2116	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	3797	10-7-2013	Wed	2118	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	10-7-2013	Wed	2118	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	6840	10-7-2013	Wed	2120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	4860	10-7-2013	Wed	2120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	10998	11-7-2013	Thu	0115	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10180	11-7-2013	Thu	0118	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10640	11-7-2013	Thu	0120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	11-7-2013	Thu	0120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	8750	11-7-2013	Thu	0125	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	6666	11-7-2013	Thu	0127	In tfc: TA56 45UA 35N4 NUTD 7UT5 TU3U (see N&O 190)	CW	(JPL)
M89	10998	11-7-2013	Thu	0157	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	8750	11-7-2013	Thu	0933	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	5588	11-7-2013	Thu	0936	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	8040	11-7-2013	Thu	1016	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	8789	11-7-2013	Thu	1019	V AUTV (x3) DE 5CFG (x2) (Cont'd)	CW	(JPL)
M89	10180	11-7-2013	Thu	1028	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	5588	11-7-2013	Thu	1032	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10640	11-7-2013	Thu	1120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	11-7-2013	Thu	1120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	7602	11-7-2013	Thu	1437	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	5230	11-7-2013	Thu	1437	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	10998	11-7-2013	Thu	1439	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	4512	11-7-2013	Thu	1440	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	11-7-2013	Thu	1440	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	3330	11-7-2013	Thu	1441	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	6666	11-7-2013	Thu	1446	In tfc: NTDU N6U7 A7NA DNU4 4536 6N64 745A III = = (see N&O 190)	CW	(JPL)
M89	8750	12-7-2013	Fri	0140	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	8750	12-7-2013	Fri	0834	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	5588	12-7-2013	Fri	1034	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10998	12-7-2013	Fri	1505	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10998	13-7-2013	Sat	1712	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	6840	13-7-2013	Sat	1720	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	4860	13-7-2013	Sat	1720	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	5230	13-7-2013	Sat	1726	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	13-7-2013	Sat	1726	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	3330	13-7-2013	Sat	1728	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	4512	13-7-2013	Sat	1845	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	10998	14-7-2013	Sun	1804	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	11154	14-7-2013	Sun	1805	A70 in tfc: 554AD UN5 56TT U34T 5.E = 53WU 7A7D 54TT NR R3.? 54TT N.44 55.T D.N. (see N&O 190)	CW	(JPL)
M89	4474	14-7-2013	Sun	2054	V RXP7 de CZT2 (repeating)	CW	(MPJ)
M89	5230	14-7-2013	Sun	2113	V DKG6 de 3A7D	CW	(MPJ)
M89	10998	15-7-2013	Mon	0202	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	8110	15-7-2013	Mon	0204	V 7NPE (x3) DE QV5B (x2) (Cont'd)	CW	(JPL)
M89	8110	15-7-2013	Mon	0943	V 7NPE (x3) DE QV5B (x2) (Cont'd)	CW	(JPL)
M89	8750	15-7-2013	Mon	0945	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	8040	15-7-2013	Mon	0947	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	5588	15-7-2013	Mon	0949	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10640	15-7-2013	Mon	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	15-7-2013	Mon	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10998	15-7-2013	Mon	1045	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10998	15-7-2013	Mon	1318	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	4860	15-7-2013	Mon	1320	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	15-7-2013	Mon	1320	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	5500	15-7-2013	Mon	1325	V 7NPE (x3) DE QV5B (x2) (Cont'd)	CW	(JPL)

Code	Freq.	date	day	UTC	remarks	mode	contributor
M89	3797	15-7-2013	Mon	1326	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	15-7-2013	Mon	1326	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3330	15-7-2013	Mon	1327	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10998	16-7-2013	Tue	0009	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	8110	16-7-2013	Tue	0011	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	7582	16-7-2013	Tue	0011	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	6666	16-7-2013	Tue	0017	DOM1 in chat/tfc: RR 1024 W = DU34 AR K. R R PT 9W - T.4 AR K. R RPT 9W = TAD4 AR K (see N&O 190)	CW	(JPL)
M89	7582	16-7-2013	Tue	0611	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	8110	16-7-2013	Tue	0611	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	6840	16-7-2013	Tue	0620	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	16-7-2013	Tue	0620	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	4225	16-7-2013	Tue	1108	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	5500	16-7-2013	Tue	1108	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	3330	16-7-2013	Tue	1110	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	4512	16-7-2013	Tue	1112	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	5500	16-7-2013	Tue	1342	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	16-7-2013	Tue	1342	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	3330	16-7-2013	Tue	1343	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10998	16-7-2013	Tue	1344	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	4512	16-7-2013	Tue	1345	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	16-7-2013	Tue	1345	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	5555	16-7-2013	Tue	2235	In chat/tfc: QSL ..34 K. SR 7G GA K. HR 7G GA. 7G..//CCK CK 30 12 07 17 060 PN (see N&O 190)	CW	(JPL)
M89	6840	17-7-2013	Wed	0320	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	17-7-2013	Wed	0320	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	8750	17-7-2013	Wed	1014	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	6840	17-7-2013	Wed	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	17-7-2013	Wed	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	5588	17-7-2013	Wed	1118	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	4512	17-7-2013	Wed	1125	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	10998	17-7-2013	Wed	1632	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	4512	17-7-2013	Wed	1633	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	17-7-2013	Wed	1633	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	3330	17-7-2013	Wed	1634	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	5230	17-7-2013	Wed	1635	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10998	17-7-2013	Wed	2333	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	8750	17-7-2013	Wed	2335	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	8040	17-7-2013	Wed	2337	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	10640	18-7-2013	Thu	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	18-7-2013	Thu	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	8750	18-7-2013	Thu	1025	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	10180	18-7-2013	Thu	1031	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	8040	18-7-2013	Thu	1127	V H2FL (x3) DE DRV8 (x2) (Cont'd) //6773	CW	(JPL)
M89	6773	18-7-2013	Thu	1127	V H2FL (x3) DE DRV8 (x2) (Cont'd) //8040	CW	(JPL)
M89	5588	18-7-2013	Thu	1129	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	3330	18-7-2013	Thu	1215	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10998	18-7-2013	Thu	1216	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	5801	18-7-2013	Thu	1217	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	10180	18-7-2013	Thu	1217	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	10640	18-7-2013	Thu	1220	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	18-7-2013	Thu	1220	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10998	18-7-2013	Thu	2218	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	6840	18-7-2013	Thu	2220	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	4860	18-7-2013	Thu	2220	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	8040	18-7-2013	Thu	2227	V H2FL (x3) DE DRV8 (x2) (Cont'd) //6773	CW	(JPL)
M89	6773	18-7-2013	Thu	2227	V H2FL (x3) DE DRV8 (x2) (Cont'd) //8040	CW	(JPL)
M89	4860	19-7-2013	Fri	1720	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	19-7-2013	Fri	1720	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	10998	19-7-2013	Fri	1725	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	3330	19-7-2013	Fri	1726	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	5230	19-7-2013	Fri	1727	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)

Code	Freq.	date	day	UTC	remarks	mode	contributor
M89	3642	19-7-2013	Fri	1727	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	4512	19-7-2013	Fri	1729	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	19-7-2013	Fri	1729	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	5487	19-7-2013	Fri	1803	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	5588	20-7-2013	Sat	1054	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	6773	20-7-2013	Sat	1058	V H2FL (x3) DE DRV8 (x2) (Cont'd) //8040	CW	(JPL)
M89	8040	20-7-2013	Sat	1058	V H2FL (x3) DE DRV8 (x2) (Cont'd) //6773	CW	(JPL)
M89	8582	20-7-2013	Sat	1705	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	8580	20-7-2013	Sat	1856	V YUQW YUQW YUQW de ASDF ASDF	CW	(FN)
M89	3330	20-7-2013	Sat	1901	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	5230	20-7-2013	Sat	1903	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	7602	20-7-2013	Sat	1903	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	8582	20-7-2013	Sat	1915	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	6840	20-7-2013	Sat	1920	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	4860	20-7-2013	Sat	1920	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	20-7-2013	Sat	1923	VVV Q2M Q2M Q2M de NYZ NYZ	CW	(FN)
M89	10998	21-7-2013	Sun	1641	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	5500	21-7-2013	Sun	1643	V 7NPE (x3) DE QV5B (x2) (Cont'd)	CW	(JPL)
M89	7602	21-7-2013	Sun	1647	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	21-7-2013	Sun	1647	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	3330	21-7-2013	Sun	1648	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	3797	21-7-2013	Sun	1650	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	21-7-2013	Sun	1650	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	8581	21-7-2013	Sun	1653	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	10998	21-7-2013	Sun	2000	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	5500	21-7-2013	Sun	2002	V 7NPE (x3) DE QV5B (x2) (Cont'd)	CW	(JPL)
M89	4512	21-7-2013	Sun	2004	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	21-7-2013	Sun	2004	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	3330	21-7-2013	Sun	2006	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	7602	21-7-2013	Sun	2008	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	21-7-2013	Sun	2008	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	8581	21-7-2013	Sun	2012	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	6840	21-7-2013	Sun	2020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	4860	21-7-2013	Sun	2020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	5500	22-7-2013	Mon	1015	In tfc: COMM/..../1535/G65/4.19 AR. Return to V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	10640	22-7-2013	Mon	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	22-7-2013	Mon	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	6773	22-7-2013	Mon	1029	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	5588	22-7-2013	Mon	1031	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10998	22-7-2013	Mon	1706	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	5485	22-7-2013	Mon	1712	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	10998	22-7-2013	Mon	2053	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	3642	22-7-2013	Mon	2055	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	5500	22-7-2013	Mon	2056	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	22-7-2013	Mon	2056	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	4512	22-7-2013	Mon	2058	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	22-7-2013	Mon	2058	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	3330	22-7-2013	Mon	2100	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	5485	22-7-2013	Mon	2103	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	5230	22-7-2013	Mon	2116	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10180	23-7-2013	Tue	1059	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	5500	23-7-2013	Tue	1102	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	23-7-2013	Tue	1102	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	5588	23-7-2013	Tue	1103	2SLC in tfc: 76TA 73AT D7T7 NNU6 3474 A3AT 5T73 T6.3 NTT5 (see N&O 190)	CW	(JPL)
M89	4512	23-7-2013	Tue	1132	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	8582	23-7-2013	Tue	1319	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	10180	23-7-2013	Tue	1332	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10998	23-7-2013	Tue	1335	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10998	23-7-2013	Tue	1851	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	4225	23-7-2013	Tue	1853	V 7NPE (x3) DE QV5B (x2) (Cont'd)	CW	(JPL)

Code	Freq.	date	day	UTC	remarks	mode	contributor
M89	3330	23-7-2013	Tue	1855	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	3642	23-7-2013	Tue	1859	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	4512	23-7-2013	Tue	1901	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	4860	23-7-2013	Tue	2020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	23-7-2013	Tue	2020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	8582	23-7-2013	Tue	2025	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	10998	24-7-2013	Wed	1649	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	4512	24-7-2013	Wed	1651	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	24-7-2013	Wed	1651	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	3330	24-7-2013	Wed	1653	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	7602	24-7-2013	Wed	1655	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	24-7-2013	Wed	1655	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	3330	24-7-2013	Wed	2010	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	5485	24-7-2013	Wed	2012	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	6840	24-7-2013	Wed	2020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	4860	24-7-2013	Wed	2020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	5485	24-7-2013	Wed	2253	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	6840	25-7-2013	Thu	0020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	25-7-2013	Thu	0020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	8750	25-7-2013	Thu	0025	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	10640	25-7-2013	Thu	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	25-7-2013	Thu	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	5588	25-7-2013	Thu	1026	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10180	25-7-2013	Thu	1030	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	5555	25-7-2013	Thu	1034	In tfc: 53TN DN74 67UA T54U N3A. 56DA DNT5 7TA4 (Cont'd) AR = D4N3 73AD TAU3 (Cont'd) AR == N6U7 .ND7 3U45 DTUA 43A6 DAT6 (Cont'd)	CW	(JPL)
M89	3330	25-7-2013	Thu	1410	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	3797	25-7-2013	Thu	1412	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	25-7-2013	Thu	1412	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	5485	25-7-2013	Thu	1413	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	5230	25-7-2013	Thu	1857	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	25-7-2013	Thu	1857	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	3330	25-7-2013	Thu	1859	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	4512	25-7-2013	Thu	1901	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	25-7-2013	Thu	1901	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	10998	25-7-2013	Thu	1905	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	6773	26-7-2013	Fri	0941	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	10180	26-7-2013	Fri	0943	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	5588	26-7-2013	Fri	0945	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	3797	26-7-2013	Fri	1405	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	26-7-2013	Fri	1405	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	5801	26-7-2013	Fri	1407	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	10180	26-7-2013	Fri	1407	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	5485	26-7-2013	Fri	1411	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	5555	26-7-2013	Fri	1412	In tfc: 35AT NU37 4N64 3D7D A7N6 N3TA 6DND (see N&O 190)	CW	(JPL)
M89	3330	26-7-2013	Fri	1412	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	5485	26-7-2013	Fri	1845	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	3330	26-7-2013	Fri	1847	2SLC in tfc: VEEE 6 Q.3 RMKS 6041 TO 4634/45.1.. C.. AR == 41981/4?/4634/040.0/117NR/6041 AR = 41981/4?/4634/0400/117NR/6041 AR AR	CW	(JPL)
M89	4860	26-7-2013	Fri	1920	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	26-7-2013	Fri	1920	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	4860	26-7-2013	Fri	2120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	26-7-2013	Fri	2120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	3330	26-7-2013	Fri	2125	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	5801	26-7-2013	Fri	2127	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	10180	26-7-2013	Fri	2127	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	5485	26-7-2013	Fri	2129	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	5500	28-7-2013	Sun	1827	V 7NPE (x3) DE QV5B (x2) (Cont'd)	CW	(JPL)
M89	4512	28-7-2013	Sun	1829	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	3330	28-7-2013	Sun	1831	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)

Code	Freq.	date	day	UTC	remarks	mode	contributor
M89	5485	28-7-2013	Sun	1833	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	6840	28-7-2013	Sun	2023	VVV Q2M de NYZ	CW	(MPJ)
M89	5500	29-7-2013	Mon	2041	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	29-7-2013	Mon	2041	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	4512	29-7-2013	Mon	2043	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	29-7-2013	Mon	2043	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	3330	29-7-2013	Mon	2045	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	5485	29-7-2013	Mon	2046	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	3642	29-7-2013	Mon	2049	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	7602	29-7-2013	Mon	2049	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	4860	29-7-2013	Mon	2120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	29-7-2013	Mon	2120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	8789	30-7-2013	Tue	0028	V WITN DE GNXG. VVV UGT COMM = 536/2105/ZM EEE. VVV UGT COMM = 7536/2105/Z25/4314 AT	CW	(JPL)
M89	10640	30-7-2013	Tue	1220	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	30-7-2013	Tue	1220	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	3330	30-7-2013	Tue	1225	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	3797	30-7-2013	Tue	1229	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	30-7-2013	Tue	1229	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	5801	30-7-2013	Tue	1231	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	10180	30-7-2013	Tue	1231	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	4225	30-7-2013	Tue	1237	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	5500	30-7-2013	Tue	1237	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M97	10375	15-7-2013	Mon	1512	SD 88 SN 45	CW	(JPL-HK)
M97	10375	17-7-2013	Wed	1454	SO DIEN:83 DK: HT SO NHOM:40 AAAAAAAA 55276 65960 55213 17964 55315 ...	CW	(Token)
MX	4505	28-6-2013		2009	Beacon "V"	CW	(BCI)
MX	5153.8	30-6-2013		1930	Beacon "P"	CW	(BCI)
MX	7038.8	1-7-2013	Mon	0100	Beacon "P" Kaliningrad	CW	(LG2)
MX	7038.8	1-7-2013	Mon	0100	Beacon "P" Kaliningrad	CW	(LG2)
MX	5156.8	1-7-2013	Mon	0101	Beacon "L" St Petersburg	CW	(LG2)
MX	13528	1-7-2013	Mon	1323	Beacon "C"	CW	(MPJ)
MX	13527.7	2-7-2013	Tue	1041	Beacon "D" Sevastopol	CW	(SW2)
MX	13528	2-7-2013	Tue	1042	Beacon "C" Moscow	CW	(SW2)
MX	10871.7	2-7-2013	Tue	2104	Beacon "D" Sevastopol	CW	(LG2)
MX	10872	2-7-2013	Tue	2104	Beacon "C" Moscow	CW	(LG2)
MX	10871.9	2-7-2013	Tue	2104	Beacon "S" Severomorsk	CW	(LG2)
MX	4505.5	2-7-2013	Tue	2124	Beacon "V" Khiva	CW	(LG2)
MX	8497.8	3-7-2013	Wed	1828	Beacon "L" St. Petersburg	CW	(WP3)
MX	16333	4-7-2013	Thu	1011	Beacon "L" St Petersburg	CW	(LG2)
MX	5156.5	4-7-2013	Thu	1145	Beacon "L"	CW	(JPL-FNL)
MX	6917.5	4-7-2013	Thu	1145	Beacon "L"	CW	(JPL-FNL)
MX	7029	4-7-2013	Thu	1606	Beacon "V"	CW	(JPL-RUS)
MX	16331.9	7-7-2013	Sun	1604	Beacon "S" Severomorsk	CW	(MPJ)
MX	16332	7-7-2013	Sun	1605	Beacon "C" Moscow	CW	(MPJ)
MX	4505.5	8-7-2013	Mon	1815	Continuous 5 5 5 5 ... Faulty "V" beacon	CW	(FN)
MX	8498	9-7-2013	Tue	1003	Beacon "L"	CW	(JPL-RUS)
MX	4505.5	9-7-2013	Tue	1905	Beacon "V"	CW	(FN)
MX	8497.8	9-7-2013	Tue	2243	Beacon "L" St Petersburg0	CW	(LG2)
MX	5157	11-7-2013	Thu	0948	Beacon "L"	CW	(JPL-FNL)
MX	8497.8	13-7-2013	Sat	0029	Russian Marker "L" St Petersburg	CW	(Topol)
MX	4505.5	14-7-2013	Sun	2057	Beacon "V" sending an "I" instead of "V"	CW	(MPJ)
MX	5156.8	15-7-2013	Mon	1038	Beacon "L"	CW	(JPL-FNL)
MX	5156.8	16-7-2013	Tue	1142	Beacon "L"	CW	(JPL-FNL)
MX	6917.5	16-7-2013	Tue	1142	Beacon "L"	CW	(JPL-FNL)
MX	4150	17-7-2013	Wed	2348	Beacon "V"	CW	(JPL-RUS)
MX	4505.5	19-7-2013	Fri	1911	Defective "V" marker sending "Z" and "B"	CW	(AB/FN)
MX	4328	21-7-2013	Sun	0143	Beacon "R"	CW	(JPL-RUS)
MX	5153.7	22-7-2013	Mon	1948	Beacon "D" Odessa/Sevastopol	CW	(MPJ)
MX	5153.8	22-7-2013	Mon	1949	Beacon "P" Kaliningrad	CW	(MPJ)
MX	5153.9	22-7-2013	Mon	1950	Beacon "S" Severomorsk	CW	(MPJ)
MX	8497.8	24-7-2013	Wed	2140	Beacon "L"	CW	(LG2)

Code	Freq.	date	day	UTC	remarks	mode	contributor
MX	8498	25-7-2013	Thu	1913	Beacon "L"	CW	(JPL-RUS)
MX	10872.2	28-7-2013	Sun	0607	Beacon "F"	CW	(AB-HK)
MX	10872.4	28-7-2013	Sun	0607	Beacon "M"	CW	(AB-HK)
MX	16332.2	28-7-2013	Sun	0607	Beacon "F"	CW	(AB-HK)
MX	10872.3	28-7-2013	Sun	0607	Beacon "K"	CW	(AB-HK)
MX	16332	28-7-2013	Sun	1534	Beacon "C" Moscow	CW	(MPJ)
MX	10871.7	28-7-2013	Sun	1853	Beacon "D" Sevastopol/Odessa	CW	(MPJ)
MX	10871.9	28-7-2013	Sun	1854	Beacon "S" Severomorsk	CW	(MPJ)
MX	10872	28-7-2013	Sun	1855	Beacon "C" Moscow	CW	(MPJ)
MX	6817.5	30-7-2013	Tue	0930	"L" beacon with faulty TX.	CW	(Gwr)
RADv	4831	6-7-2013	Sat	2245	Possibly Russian Air Defense. Targets, speeds, coordinates	USB	(GB)
RADv	4207	16-7-2013	Tue	----	Possibly Russian Air Defense. Radio location data	USB	(MAUK)
RADv	5680	16-7-2013	Tue	2006	OM Russian broadcasting series of numeric groups, poss tracking/positional data. Example: 91st 67 65 at 13 (on correct minute)	USB	(RP-MD)
RADv	4207	17-7-2013	Wed	----	Possibly Russian Air Defense. Radio location data	USB	(MAUK)
RADv	4250.1	17-7-2013	Wed	----	Possibly Russian Air Defense. Radio location data	USB	(MAUK)
RAv	11360	9-7-2013	Tue	1052	Korsar w/76772 (IL-76M) reporting departure from Sochi at 2202 MSK USB and passing point (?UNEPA?). Will land at Tver	USB	(RP-MD)
RAv	11360	9-7-2013	Tue	1052	Korsar in radio checks w/Proselok, Polis, Davlenie & Klarnetist	USB	(RP-MD)
RAv	11360	11-7-2013	Thu	1230	Korsar w/86855 reporting ETA at Cedar (Bryansk AB) 1600 MSK according to plan OTP	USB	(RP-MD)
RAv	11360	16-7-2013	Tue	1102	Korsar w/86842 (IL-76MD) reporting ETA for landing at Pskov at 1545 MSK	USB	(RP-HOL)
RAv	11360	16-7-2013	Tue	1611	Korsar w/09329 (AN-22) reporting fuel 24 tons	USB	(RP-MD)
RAv	11360	17-7-2013	Wed	1126	Korsar w/86910 (IL-76MD) reporting landing at Vladivostok	USB	(RP-MD)
RAv	11360	22-7-2013	Mon	1501	Korsar w/76724 (IL-76MD) reporting departure from Dorozhniy, flt alt 2700 mtrs, cargo 21 tons and passing point (1 word missed) Karlinskaya.	USB	(RP-MD)
RAv	11360	25-7-2013	Thu	1131	78794 (IL-76MD): 1131 USB calling Klarnetist no response.	USB	(RP-MD)
RAv	11360	25-7-2013	Thu	1138	78840 (IL-76MD): 1138 USB w/Chakalovskij reporting landing at (?Bilbets?).	USB	(RP-MD)
RAv	11360	25-7-2013	Thu	1200	Korsar w/radio checks w/Klarnetist; Proselok; Polis; and Davlenie)	USB	(RP-MD)
RAv	11360	25-7-2013	Thu	1445	Korsar w/76724 (IL-76MD) reporting landing at Dorozhniy at 1745 MSK w/fuel 10 tons.	USB	(RP-MD)
RAv	8909	25-7-2013	Thu	2245	Ochitska w/79748 (poss TU-95) w/formatted 3-figure msg 970/686/792/895/904/(missed). At 2335 USB w/Ochitska w/ 2 msgs 748/790/449/349/727/704 & 394/907/034/755/033/432. At 2345 w/Ochitska w/msg 970/907/274/786/371/694	USB	(RP-MD)
RAv	8909	25-7-2013	Thu	2250	Ochitska w/79743 (poss TU-95) w/msg 970/786/254/537/397/601. At 2318 w/Ochitska w/ msg 970/790/284/315/371/462.	USB	(RP-MD)
RAv	8909	25-7-2013	Thu	2252	Ochitska w/78166 (poss TU-95) w/msg 722/786/944/414/397/601. Also called PROCELKA (unid-assoc w/Russian Strategic Forces) w/no response. At 2315 w/Ochitska w/msg 722/790/946/633/371/996. At 2347 w/Ochitska w/msg 722/907/946/904/371/794.	USB	(RP-MD)
RAv	8909	25-7-2013	Thu	2320	Ochitska w/?(?30?)975 (unid) w/msg 862/030/676/646/466.	USB	(RP-MD)
RAv	11360	26-7-2013	Fri	1103	Klarnetist w/unheard station relaying flt info on 76724 (IL-76MD) next USB stop is Sochi, alt 2700 mtrs & fuel 40 tons. At 1216 76724 reports landing at Sochi at 1616 MSK w/fuel 24 tons	USB	(RP-MD)
RAv	11360	26-7-2013	Fri	1230	Korsar w/76733 (IL-76MD) confirming landing at undisclosed location. USB	USB	(RP-MD)
RAv	11360	26-7-2013	Fri	1242	Korsar w/86842 (IL-76MD) reporting ETA landing at Pskov 1800 MSK	USB	(RP-MD)
RAv	11360	26-7-2013	Fri	1403	Korsar w/86910 (IL-76MD) reporting departure from Karakulya (un- loc)	USB	(RP-MD)
RAv	11360	26-7-2013	Fri	1531	Korsar w/78838 (IL-76MD) reporting 2 hours into flt and passing point TUPLA w/fuel 25 tons. At 1426 reports landing at Tver.	USB	(RP-MD)
RAv	11354	26-7-2013	Fri	1540	Priboj calling 88108 (unid) w/no response	USB	(RP-MD)
RAv	8895	26-7-2013	Fri	1740	"W"-markers at 1740 and 1800 UTC	USB	(Tom)
RAv	6685	26-7-2013	Fri	1750	Klarnetist w/76733 (IL-76MD) reporting landing at Tver at 2050 MSK	USB	(RP-MD)
RAv	6685	26-7-2013	Fri	1800	Korsar w/Klarnetist: Davlenie; Polis; Proselok	USB	(RP-MD)
RAv	8909	26-7-2013	Fri	1837	active in call ups	USB	(Tom)
RAv	11360	29-7-2013	Mon	1204	Korsar w/Proselok, Bryansk relaying flt info for 76764 (IL-76MD) reporting depature from Buntar at 1528 MSK w/fuel 65 tons and ETA landing at (?Sesha?) at 1547 MSK.	USB	(RP-MD)
RAv	11360	29-7-2013	Mon	1213	Acft 76734 (IL-76MD): 1213 USB calling Proselok w/no response.	USB	(RP-MD)
RAv	11360	29-7-2013	Mon	1615	Korsar w/09341 (Russian AF AN-22A) who reports passing point TUDEC (spelled) w/fuel 30 tons.	USB	(RP-MD)

Code	Freq.	date	day	UTC	remarks	mode	contributor
RAv	11360	29-7-2013	Mon	1718	Korsar: w/82040 (Russian AF AN-124) reporting departure from Zaparozhe w/fuel 77 tons and next will be landing at (?Todbai?)	USB	(RP-MD)
RMv	6370	12-7-2013	Fri	0042	Russian Unid Mil?? Russian male reads numbers, repeats four times 123356(77)38. Response by second male	USB	(Topol)
RMv	5741	16-7-2013	Tue	1819	(1 word missed)-45 (O/M Russian) w/Pompei-50 in radio checks.	USB	(RP-HOL)
RMv	5741	16-7-2013	Tue	1830	Folka-97 (O/M Russian) w/(missed)-22. Folka-97 also w/Panmoy/Polmoy-96. Unid encrypted voice/data signal noted on this freq.	USB	(RP-HOL)
RMv	5741	16-7-2013	Tue	1944	Folka-97 clg Pola-92 for radio checks. Also calling Panmoy/Polmoy-96 w/no response.	USB	(RP-HOL)
RMv	5741	16-7-2013	Tue	1950	Folka-97 w/Primoy-96	USB	(RP-MD)
RMv	4840	24-7-2013	Wed	1445	Prizma-41 wkg Pejzazh-32	USB	(Gwr)
RMv	4593	29-7-2013	Mon	1040	i.p. 23 05 97 97 53 Kak prinyali? Priyom. Na svyazi, priyom.	USB	(Gwr)
RNAv	11354	9-7-2013	Tue	1052	Priboj w/52850 reporting landing at Anapa at 1252 MSK w/fuel 3600 kgs.	USB	(RP-MD)
RNAv	11354	9-7-2013	Tue	1226	Priboj w/75105 reporting departure from Ostafyevo at 1318 MSK and ETA landing at Levashevo at 1340 w/fuel 17,000 kgs.	USB	(RP-MD)
RNAv	11354	9-7-2013	Tue	1750	Priboj w/52845 reporting flt from Ostafyevo to Eisk w/fuel 5300 kgs	USB	(RP-MD)
RNAv	11354	9-7-2013	Tue	1757	Priboj w/76105 reporting landing at Severomorsk-3 at 1756. Priboj relays flt info to Novator	USB	(RP-MD)
RNAv	11354	11-7-2013	Thu	1050	Priboj w/52891 (Russian Navy AN-26) reporting landing at Anapa at 1050 UTC. Priboj relays flt info to Kraket	USB	(RP-MD)
RNAv	11354	11-7-2013	Thu	1112	Priboj w/52856 (Russian Navy AN-26) reporting landing at Levashevo at 1112 UTC. Priboj relays flt info to Novator (Naval Air Transports Northern Sector, Murmansk)	USB	(RP-MD)
RNAv	11354	11-7-2013	Thu	1153	Priboj w/5286? (Russian Navy AN-26) reporting departure from Levashevo at 1125 UTC and ETA landing at Ostafyevo at 1240 UTC altitude 5000 meters and fuel 4300 kgs	USB	(RP-MD)
RNAv	11354	11-7-2013	Thu	1155	Priboj w/52862 (Russian Navy AN-26) reporting landing at Ostafyevo at 1153 UTC w/fuel 2100 kgs. Priboj relays info to Novator	USB	(RP-MD)
RNAv	11354	11-7-2013	Thu	1219	Priboj w/75108 (Russian Navy AN-26) reporting passing point (missed) at 1215 UTC at altitude 2400 meters w/fuel 13,500 kgs	USB	(RP-MD)
RNAv	11354	16-7-2013	Tue	1050	Priboj w/52847 (Russian Navy AN-26) reporting passing point (missed) at altitude 5800 mtrs w/fuel 3100 kgs. Priboj relays flt info to Novator	USB	(RP-HOL)
RNAv	11354	16-7-2013	Tue	1129	Priboj w/52903 (Russian Navy AN-26) reporting passing point (?NAMOT?) at 1412 MSK at altitude 1900 mtrs. Reporting fuel for 4 hour flt.	USB	(RP-HOL)
RNAv	11354	16-7-2013	Tue	1136	Priboj w/52847 (Russian Navy AN-26) reporting landing at Rostov-na Donu at 1136 UTC.	USB	(RP-HOL)
RNAv	11354	26-7-2013	Fri	1103	Priboj w/52891 (Russian Navy AN) reporting ETA landing at Kacha at 1123 UTC	USB	(RP-MD)
S06	12165	1-7-2013	Mon	1210	831 ...	AM	(Topol)
S06	7982	1-7-2013	Mon	1900	349 0	AM	(HFD)
S06	6772	6-7-2013	Sat	1935	426 426 426 00000	AM	(GHn)
S06	15855	8-7-2013	Mon	1815	376 0	AM	(HFD)
S06	6984	8-7-2013	Mon	1905	349 0	AM	(HFD)
S06	6984	8-7-2013	Mon	1905	349 349 349 00000	USB	(GHn)
S06	13505	8-7-2013	Mon	1915	376 0	AM	(HFD)
S06	6984	11-7-2013	Thu	1905	349 0	AM	(HFD)
S06	6984	15-7-2013	Mon	1905	349 0	USB	(HFD)
S06	9943	20-7-2013	Sat	1900	857 0	AM	(HFD)
S06	7643	20-7-2013	Sat	1900	319 0	AM	(HFD)
S06	6772	20-7-2013	Sat	1935	426 0	AM	(HFD)
S06	6772	20-7-2013	Sat	1950	426 426 426 00000	AM	(GHn)
S06	6833	20-7-2013	Sat	2000	319 0	AM	(HFD)
S06	8119	20-7-2013	Sat	2000	857 0	AM	(HFD)
S06	15850	22-7-2013	Mon	1815	376 376 376 00000	AM	(Topol)
S06	7982	25-7-2013	Thu	1900	349 0	AM	(HFD)
S06	7982	25-7-2013	Thu	1900	349 349 349 00000	AM	(Topol)
S06	6977	27-7-2013	Sat	1605	764 0	AM	(HFD)
S06	6772	27-7-2013	Sat	1935	426 0	AM	(HFD)
S06	6772	27-7-2013	Sat	1935	426 426 426 00000	AM	(GHn)
S06s	12952	11-7-2013	Thu	0900	167 438 5 = 82045	USB	(HFD)
S06s	13565	11-7-2013	Thu	0910	167	USB	(HFD)

Code	Freq.	date	day	UTC	remarks	mode	contributor
S06s	13145	18-7-2013	Thu	1200	425 817 6 = 92837	USB	(HFD)
S06s	14535	18-7-2013	Thu	1210	425	USB	(HFD)
S06s	16735	23-7-2013	Tue	0600	438 205 6 47665 94092 48521 63888 92060 11749 205 6 00000	USB	(Topol)
S06s	15230	23-7-2013	Tue	0610	438 205 6 47665 94092 48521 63888 92060 11749 205 6 00000	USB	(Topol)
S06s	7365	23-7-2013	Tue	0730	438 205 6 47665 94092 48521 63888 92060 11749 205 6 00000 427 863 5 36755 41778 52848 00884 52454 863 5 00000	USB	(Topol)
S06s	11655	23-7-2013	Tue	0740	438 205 6 47665 94092 48521 63888 92060 11749 205 6 00000 427 863 5 36755 41778 52848 00884 52454 863 5 00000	USB	(Topol)
S06s	14580	24-7-2013	Wed	1000	729 804 5 29245 28842 82264 14255 81545 804 5 00000	USB	(Gwr)
S06s	12592	25-7-2013	Thu	0900	167 429 5 46372 10998 23468 93856 10109 429 5 00000	USB	(Gwr)
S06s	9255	25-7-2013	Thu	0930	314 314 314 00000	USB	(Gwr)
S06s	12155	25-7-2013	Thu	1200	425 817 6 92837 56743 09892 34610 89876 46327 817 6 00000	USB	(Gwr)
S06s	14535	25-7-2013	Thu	1210	425 817 6 92837 56743 09892 34610 89876 46327 817 6 00000	USB	(Topol)
S06s	8720	26-7-2013	Fri	0600	934 586 7 92836 4747839212 09897 34286 10293 84756 586 7 00000	USB	(Topol)
S06s	9125	26-7-2013	Fri	0610	196 423 5 87642 98123 67453 92830 12678 423 5 00000	USB	(Topol)
S06s	7650	26-7-2013	Fri	0800	278 413 5 67453 89756 12316 90684 45319 413 5 00000	USB	(Topol)
S06s	7650	26-7-2013	Fri	0800	278 413 5 = 67453	USB	(HFD)
S06s	7650	26-7-2013	Fri	0800	278 413 5 67453 89756 12316 90674 45319 413 5 00000	USB	(AB)
S06s	6125	26-7-2013	Fri	0810	278 413 5 67453 89756 12316 90674 45319 413 5 00000	USB	(AB)
S06s	6125	26-7-2013	Fri	0810	278 413 5 = 67453	USB	(HFD)
S06s	10290	26-7-2013	Fri	0922	Carrier up, windows sounds, "516"	USB	(AB)
S06s	10290	26-7-2013	Fri	0930	516 274 8 64523 90756 34127 67453 76971 23221 56534 89423 274 8 00000	USB	(Topol)
S06s	10290	26-7-2013	Fri	0930	516 274 8 64523 90656 34127 67453 76971 23221 56534 89423 274 8 00000	USB	(AB)
S06s	9655	26-7-2013	Fri	0940	516 274 8 64523 90656 34127 67453 76971 23221 56534 89423 274 8 00000	USB	(AB)
S06s	9655	26-7-2013	Fri	0940	516 274 8 64523 90756 34127 67453 76971 23221 56534 89423 274 8 00000	USB	(Topol)
S06s	14835	29-7-2013	Mon	0910	872 872 872 00000	USB	(Topol)
S06s	10230	29-7-2013	Mon	1200	831 831 831 00000	USB	(Gwr)
S06s	12165	29-7-2013	Mon	1210	831 831 831 00000	USB	(Topol)
S06s	16735	30-7-2013	Tue	0600	438 438 438 00000	USB	(Topol)
S06s	15230	30-7-2013	Tue	0610	438 438 438 00000	USB	(Topol)
S06s	6780	30-7-2013	Tue	0715	374 374 374 00000	USB	(AB)
S06s	7365	30-7-2013	Tue	0730	427 427 427 00000	USB	(Topol)
S06s	11655	30-7-2013	Tue	0740	427 427 427 00000	USB	(Topol)
S06s	14373	30-7-2013	Tue	0800	351 352 352 00000	USB	(AB)
S06s	14897	31-7-2013	Wed	0740	745 745 745 00000	USB	(AB)
S06s	6755	31-7-2013	Wed	0820	471 431 431 00000	USB	(AB)
S06s	5835	31-7-2013	Wed	0830	471 431 431 00000	USB	(AB)
S06s	10120	31-7-2013	Wed	0840	328 328 328 00000	USB	(AB)
S06s	9670	31-7-2013	Wed	0850	328 328 328 00000	USB	(AB)
S06s	14580	31-7-2013	Wed	1000	729 729 729 00000	USB	(AB)
S06s	14580	31-7-2013	Wed	1000	729 729 729 00000	USB	(Gwr)
S06s	16020	31-7-2013	Wed	1010	729 729 729 00000	USB	(AB)
S06s	7545	31-7-2013	Wed	1230	967 967 967 00000	USB	(Gwr)
S11a	16530	25-7-2013	Thu	1015	475/00	USB	(Gwr)
S11a	8530	30-7-2013	Tue	0915	484/00	USB	(AB)
S11a	11581	30-7-2013	Tue	1020	426/00	USB	(AB/Gwr)
S11a	5815	31-7-2013	Wed	1020	221/00	USB	(Gwr)
S28	4625	4-7-2013	Thu	1236	MDZhB 45 023 NADUMANNYJ 48 80 45 65 Prijom	USB	(AB-EST)
S28	4625	5-7-2013	Fri	1840	Buzzer	USB	(JPL-FNL)
S28	4625	7-7-2013	Sun	1250	Buzzer	USB	(JPL-FNL)
S28	4625	8-7-2013	Mon	0955	MDZhB 19 545 KADMIEVYJ 87 38 11 21 Prijom	USB	(AB-EST)
S28	4625	8-7-2013	Mon	0959	MDZhB 78 664 GADZhENJE 37 83 02 24 Prijom	USB	(AB-EST)
S28	4625	8-7-2013	Mon	1005	MDZhB 91 316 SADZhA 58 59 44 45 Prijom	USB	(AB-EST)
S28	4625	8-7-2013	Mon	1010	MDZhB 23 312 NADGIBKA 23 20 54 97 Prijom	USB	(AB-EST)
S28	4625	9-7-2013	Tue	0940	MDZhB 83 977 NADAVKA 62 78 89 68 priyom	USB	(AB/Gwr)
S28	4625	11-7-2013	Thu	1303	Buzzer	USB	(JPL-FNL)
S28	4625	15-7-2013	Mon	0456	MDZhB 4925 VERKhOVShChIK	USB	(AB-EST)
S28	4625	22-7-2013	Mon	0835	MDZhB 03 178 MAGAYuR 54 02 22 91 Pryom	USB	(Gwr)
S28	4625	22-7-2013	Mon	0837	MDZhB 31 628 GAVYuLA 87 56 78 78 Pryom	USB	(Gwr)

Code	Freq.	date	day	UTC	remarks	mode	contributor
S28	4625	24-7-2013	Wed	0831	Voice under buzzer. Radio check	USB	(Gwr)
S28	4625	24-7-2013	Wed	0933	MDZhB 20 336 ZAVODSKOJ 51 29 93 68	USB	(Gwr)
S28	4625	25-7-2013	Thu	0243	Buzzer	USB	(JPL-RUS)
S28	4625	25-7-2013	Thu	1028	MDZhB 39 985 PILIP 05 00 95 21	USB	(Gwr)
S28	4625	29-7-2013	Mon	1030	MDZhB 59 333 SKABOLKA 93 29 06 51	USB	(Gwr)
UMv	6767.5	24-7-2013	Wed	0855	Kolos-56 wkg Shtanga-01. Network check	USB	(Gwr)
V07	13582	7-7-2013	Sun	0700	512 512 512 msg	AM	(Dan)
V07	12182	7-7-2013	Sun	0720	512 512 512 msg	AM	(Dan)
V07	10282	7-7-2013	Sun	0740	512 512 512 msg	AM	(Dan)
V07	13582	14-7-2013	Sun	0700	512 525 93 2533? 0531? 0802? 52301 ... 75743 77284 533? 9 000 000	AM	(Dan)
V07	12582	14-7-2013	Sun	0720	512 525 93 2533? 0531? 0802? 52301 ... 75743 77284 533? 9 000 000	AM	(Token)
V07	10282	14-7-2013	Sun	0740	512 525 93 2533? 0531? 0802? 52301 ... 75743 77284 533? 9 000 000	AM	(Token)
V07	12182	21-7-2013	Sun	0720	512 1 539 63 82471 33081 ... 77134 95417 000 000	AM	(Dan)
V07	13582	28-7-2013	Sun	0700	512 512 512 000	AM	(Dan)
V13	13750	6-7-2013	Sat	0500	News Star #3. Tune followed by code messages	USB	(AB-HK)
V13	13750	6-7-2013	Sat	0600	News Star #3. Tune followed by code messages	USB	(AB/TI)
V13	15388	6-7-2013	Sat	0700	News Star #4. Tune followed by code messages	USB	(AB-HK)
V13	15388	6-7-2013	Sat	0800	News Star #4. Tune followed by code messages	USB	(AB-HK)
V13	15388	7-7-2013	Sun	0700	News Star #4. Tune followed by code messages	USB	(AB-HK)
V13	15388	7-7-2013	Sun	0800	News Star #4. Tune followed by code messages	USB	(AB-HK)
V13	15388	20-7-2013	Sat	0705	New Star i.p.	USB	(AB-HK)
V13	13750	20-7-2013	Sat	1312	New Star i.p.	USB	(AB-HK)
V13	15388	26-7-2013	Fri	0705	New Star in progress	USB	(AB-HK)
V13	13750	28-7-2013	Sun	0602	New Star i.p.	USB	(AB-HK)
V13	15388	28-7-2013	Sun	0700	New Star #4. Tune followed by coded messages	USB	(AB-HK)
X06	14377	1-7-2013	Mon	0931	Mazielka. Sequence: 432516	USB	(LDO)
X06	12152	1-7-2013	Mon	0936	Mazielka. Sequence: 432516	USB	(LDO)
X06	17470	11-7-2013	Thu	1231	Mazielka	AM	(MCO)
X06	12200	31-7-2013	Wed	0932	DOSC Moscow. Mazielka. Sequence: 241563	USB	(PPA)
XP	9243	25-7-2013	Thu	1940	922 1. 3 apparent messages commencing 06618 00189//ending 74601 17126; 35218 71670//35589 01102; 05681 59282//18243 61765 each of 60 groups	MFSK-20/10Bd	(MPJ)
XPA	10943	2-7-2013	Tue	1730	msg	MFSK	(HFD)
XPA	10243	2-7-2013	Tue	1750	msg	USB	(HFD)
XPA	9243	2-7-2013	Tue	1810	msg	USB	(HFD)
XPA	11409	6-7-2013	Sat	0600	msg	USB	(HFD)
XPA	13509	6-7-2013	Sat	0620	msg	USB	(HFD)
XPA	14609	6-7-2013	Sat	0640	msg	USB	(HFD)
XPA	10943	9-7-2013	Tue	1730	22 922 922 1 922 922 922 1 922 922 922 1 07260 00225 22695 73575 91559 (see N&O 190)	MFSK	(ANAF)
XPA	9243	18-7-2013	Thu	1810	4-group message: 09086 00001 00000 10140	MFSK-20/10Bd/USB	(MPJ)
XPA	10943	23-7-2013	Tue	1730	8201 26008 35589 01102 Block Sync 64 groups 05681 59282 67731 73068 59990 ... 55042 12843 68977 18243 61765	MFSK-20/10	(MPJ)
XPA	9243	23-7-2013	Tue	1750	09264	MFSK-20/10	(MPJ)
XPA	10243	23-7-2013	Tue	1750	4 messages of 64, 32 32 & 64 groups	MFSK-20/10	(MPJ)
XPA2	18213	9-7-2013	Tue	0720	msg	USB	(HFD)
XPA2	15913	9-7-2013	Tue	0740	msg	USB	(HFD)
XPA2	12217	26-7-2013	Fri	2140	02378 00089 94406 90448 64857 44946 83106 63517 61521 33125 87662 36604 ...	MFSK	(Dan)
XSL	6417	26-7-2013	Fri	0951	Japanese Navy a.k.a. Slotmachine	QPSK 1500bd	(AB-HK)
XSL	8313	26-7-2013	Fri	0951	Japanese Navy a.k.a. Slotmachine	QPSK 1500bd	(AB-HK)
XSL	8703.5	26-7-2013	Fri	0951	Japanese Navy a.k.a. Slotmachine	QPSK 1500bd	(AB-HK)
XSL	8588	26-7-2013	Fri	0951	Japanese Navy a.k.a. Slotmachine	QPSK 1500bd	(AB-HK)
XSL	6250	26-7-2013	Fri	0951	Japanese Navy a.k.a. Slotmachine	QPSK 1500bd	(AB-HK)
XSL	4153	26-7-2013	Fri	0951	Japanese Navy a.k.a. Slotmachine	QPSK 1500bd	(AB-HK)
XSL	4231.5	26-7-2013	Fri	0951	Japanese Navy a.k.a. Slotmachine	QPSK 1500bd	(AB-HK)
XSL	6445	26-7-2013	Fri	0951	Japanese Navy a.k.a. Slotmachine	QPSK 1500bd	(AB-HK)

CONTRIBUTORS

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AB-HK	Ary Boender via remote rx Hong Kong	JPL-S	JPL via GlobalTuners Sweden
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JPL-FNL	JPL via remote rx Finland		

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